

FCC Test Report

Product Name : Bluetooth USB Adapter
Trade Name : plantronics
Model No. : BT600C
FCC ID. : AL8-BT600C

Applicant : Plantronics, Inc.

Address : 345 Encinal Street, Santa Cruz, CA 95060, USA

Date of Receipt : Jan. 02, 2018
Issued Date : Jan. 30, 2018
Report No. : 1810001R-RFUSP01V00-B
Report Version : V1.0



The test results relate only to the samples tested.

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Test Report Certification

Issued Date : Jan. 30, 2018

Report No. : 1810001R-RFUSP01V00-B




Product Name : Bluetooth USB Adapter
Applicant : Plantronics, Inc.
Address : 345 Encinal Street, Santa Cruz, CA 95060, USA
Manufacturer : Plantronics, Inc.
Model No. : BT600C
FCC ID. : AL8-BT600C
EUT Voltage : DC 5V (Power by Notebook PC)
Testing Voltage : DC 5V (Power by Notebook PC)
Trade Name : plantronics
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2016
Laboratory Name : Hsin Chu Laboratory
Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C.
TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result : Complied

Documented By : 

(Lyla Yang / Engineering Adm. Specialist)

Tested By : 

(Mark Chang / Engineer)

Approved By : 

(Roy Wang / Director)

Revision History

Report No.	Version	Description	Issued Date
1810001R-RFUSP01V00-B	V1.0	Initial issue of report	Jan. 30, 2018

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1. General Information

1.1. EUT Description

Product Name	Bluetooth USB Adapter
Trade Name	plantronics
Model No.	BT600C
Frequency Range/Channel Number	2402~2480MHz / 40 Channels
Type of Modulation	BLE (GFSK)

Antenna Information	
MFR. / Model No.	Rayson / Printed Antenna
Antenna Type	Printed Antenna
Antenna Gain	1.54dBi

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00	2402 MHz	Channel 10	2422 MHz	Channel 20	2442 MHz	Channel 30	2462 MHz
Channel 01	2404 MHz	Channel 11	2424 MHz	Channel 21	2444 MHz	Channel 31	2464 MHz
Channel 02	2406 MHz	Channel 12	2426 MHz	Channel 22	2446 MHz	Channel 32	2466 MHz
Channel 03	2408 MHz	Channel 13	2428 MHz	Channel 23	2448 MHz	Channel 33	2468 MHz
Channel 04	2410 MHz	Channel 14	2430 MHz	Channel 24	2450 MHz	Channel 34	2470 MHz
Channel 05	2412 MHz	Channel 15	2432 MHz	Channel 25	2452 MHz	Channel 35	2472 MHz
Channel 06	2414 MHz	Channel 16	2434 MHz	Channel 26	2454 MHz	Channel 36	2474 MHz
Channel 07	2416 MHz	Channel 17	2436 MHz	Channel 27	2456 MHz	Channel 37	2476 MHz
Channel 08	2418 MHz	Channel 18	2438 MHz	Channel 28	2458 MHz	Channel 38	2478 MHz
Channel 09	2420 MHz	Channel 19	2440 MHz	Channel 29	2460 MHz	Channel 39	2480 MHz

Note:

1. This device is a Bluetooth USB Adapter support BT3.0 and BLE transmitting and receiving function.
2. Regards to the frequency band operation; the lowest 、 middle and highest frequency of channel were selected to perform the test, and then shown on this report.

1.2. Test Mode

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Test Mode	Mode 1: Transmit Mode
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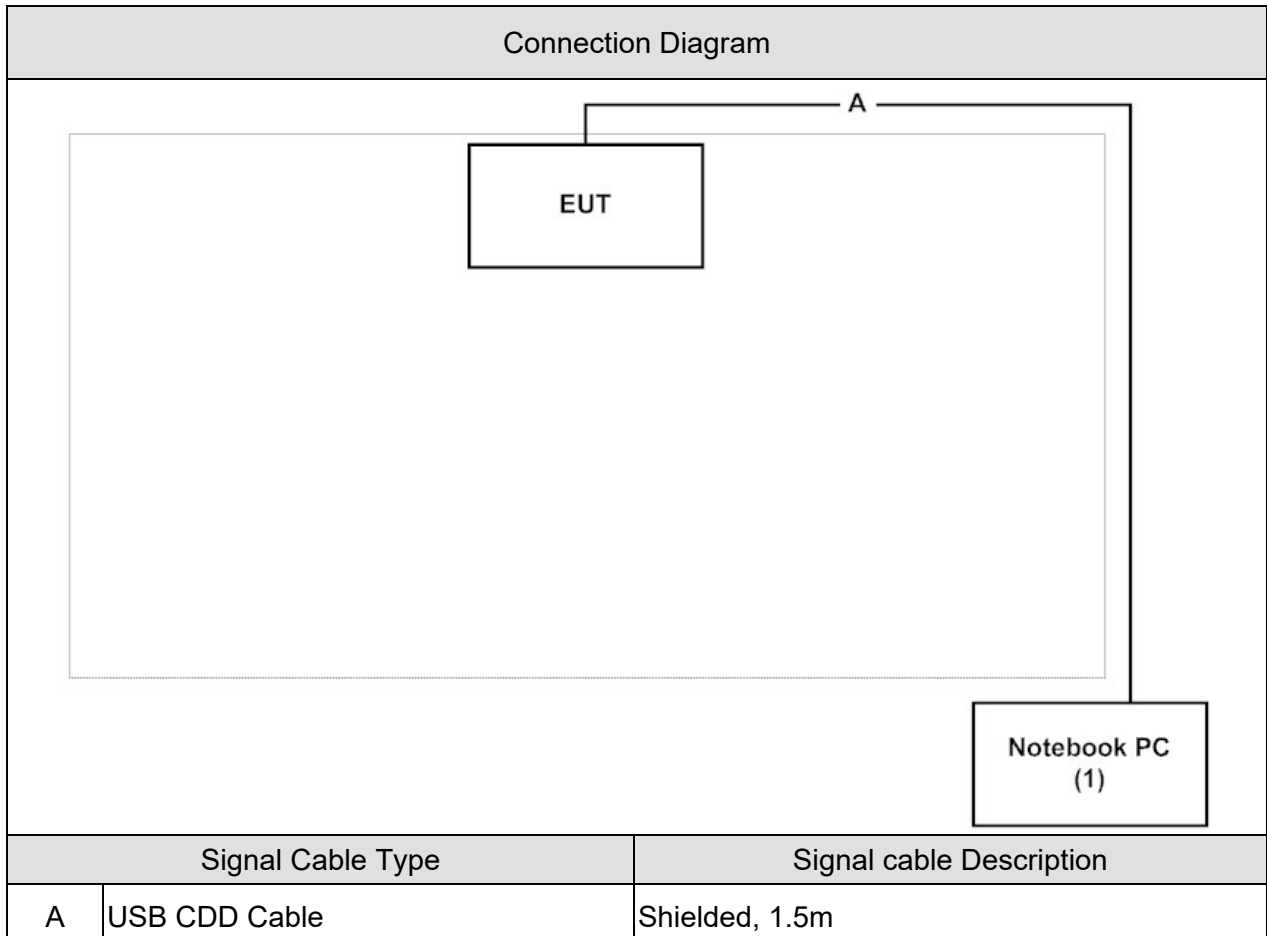
Test Items	Modulation	Channel	Result
Conducted Emission	GFSK	19	Complies
Peak Power Output	GFSK	00/19/39	Complies
Radiated Emission	GFSK	00/19/39	Complies
RF antenna conducted test	GFSK	00/19/39	Complies
Radiated Emission Band Edge	GFSK	00/19/39	Complies
Occupied Bandwidth & DTS Bandwidth	GFSK	00/19/39	Complies
Power Density	GFSK	00/19/39	Complies

1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	Lenovo	B590	WB15330077	DoC	Non-Shielded, 1.8m, one ferrite core bonded

1.4. Configuration of tested System



1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Execute the "Blue Test 3" on the laptop.
3	Configure the test mode, the test channel, and the data rate.
4	Press "Start TX" to start the continuous transmitting.
5	Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual	Test Site
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20	3
Humidity (%RH)		25 - 75	50	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output	15 - 35	24	3
Humidity (%RH)		25 - 75	45	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission	15 - 35	25	2
Humidity (%RH)		25 - 75	54	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test	15 - 35	24	3
Humidity (%RH)		25 - 75	45	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Band Edge	15 - 35	25	2
Humidity (%RH)		25 - 75	50	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth & DTS Bandwidth	15 - 35	24	3
Humidity (%RH)		25 - 75	45	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Power Density	15 - 35	24	3
Humidity (%RH)		25 - 75	45	
Barometric pressure (mbar)		860 - 1060	950-1000	

Note: Test site information refers to Laboratory Information.

USA : FCC, Registration Number: TW3024

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site :

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site : http://www.dekra.com.tw/index_en.aspx

If you have any comments, Please don't hesitate to contact us. Our test sites as below:

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1.7. List of Test Equipment

Conducted Emission /SR2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2017/02/06	2018/02/05
Test Receiver	R&S	ESCS 30	836858/022	2017/04/12	2018/04/11
LISN	R&S	ENV216	100092	2017/07/31	2018/07/30

Peak Power Output / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2018/01/02	2019/01/01
Pulse Power Sensor	Anritsu	MA2411B	1531043	2018/01/02	2019/01/01
Pulse Power Sensor	Anritsu	MA2411B	1531044	2018/01/02	2019/01/01

Radiated Emission / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2017/11/21	2018/11/20
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Bilog Antenna	Teseq	CBL6112D	23191	2017/06/28	2018/06/27
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2017/06/14	2018/06/13
Horn Antenna	Schwarzbeck	BBHA 9170	202	2017/02/15	2018/02/14
Pre-Amplifier	RF Bay Inc.	LNA-1330	12162511	2017/03/09	2018/03/08
Pre-Amplifier	EMCI	EMCI 1830I	980366	2018/01/08	2019/01/07
Pre-Amplifier	MITEQ	JS44-18004000-45-8P	2014754	2017/12/13	2018/12/12

RF antenna conducted test / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2018/01/02	2019/01/01
Pulse Power Sensor	Anritsu	MA2411B	1531043	2018/01/02	2019/01/01
Pulse Power Sensor	Anritsu	MA2411B	1531044	2018/01/02	2019/01/01

Band Edge / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2017/11/21	2018/11/20
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
Bilog Antenna	Teseq	CBL6112D	23191	2017/06/28	2018/06/27
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2017/06/14	2018/06/13
Horn Antenna	Schwarzbeck	BBHA 9170	202	2017/02/15	2018/02/14
Pre-Amplifier	RF Bay Inc.	LNA-1330	12162511	2017/03/09	2018/03/08
Pre-Amplifier	EMCI	EMCI 1830I	980366	2018/01/08	2019/01/07
Pre-Amplifier	MITEQ	JS44-18004000-45-8P	2014754	2017/12/13	2018/12/12

Occupied Bandwidth & DTS Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2018/01/02	2019/01/01
Pulse Power Sensor	Anritsu	MA2411B	1531043	2018/01/02	2019/01/01
Pulse Power Sensor	Anritsu	MA2411B	1531044	2018/01/02	2019/01/01

Power Density / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2017/03/13	2018/03/12
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2018/01/02	2019/01/01
Pulse Power Sensor	Anritsu	MA2411B	1531043	2018/01/02	2019/01/01
Pulse Power Sensor	Anritsu	MA2411B	1531044	2018/01/02	2019/01/01

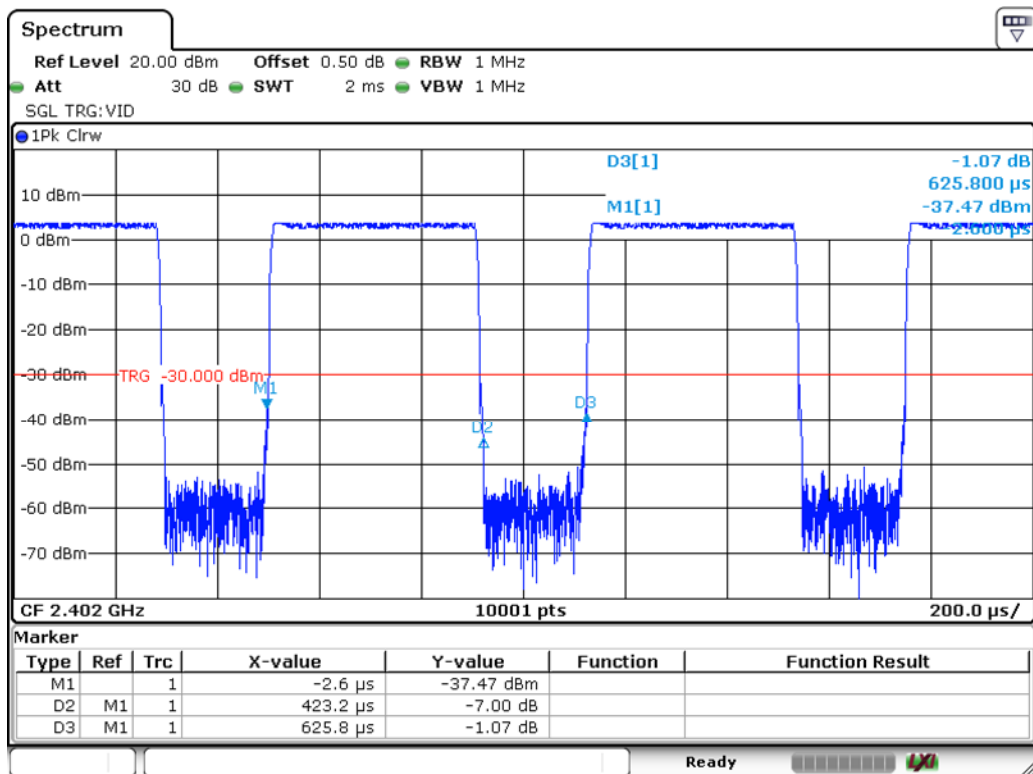
1.8. Measurement Uncertainty

Test Item	Uncertainty
Conducted Emission	± 2.26 dB
Peak Power Output	± 1.27 dB
Radiated Emission (30MHz~1GHz)	± 3.43 dB
Radiated Emission (1GHz~26.5GHz)	± 3.65 dB
RF antenna conducted test	± 1.27 dB
Band Edge	Conducted is defined as ± 1.27 dB Radiated is defined as ± 3.9 dB
Occupied Bandwidth & DTS Bandwidth	± 50 kHz
Power Density	± 1.27 dB

1.9. Duty cycle

On Time (us)	ON+Off Time (us)	Duty Cycle (%)	Off Set (dB)
423.2	625.8	≈68	3.398

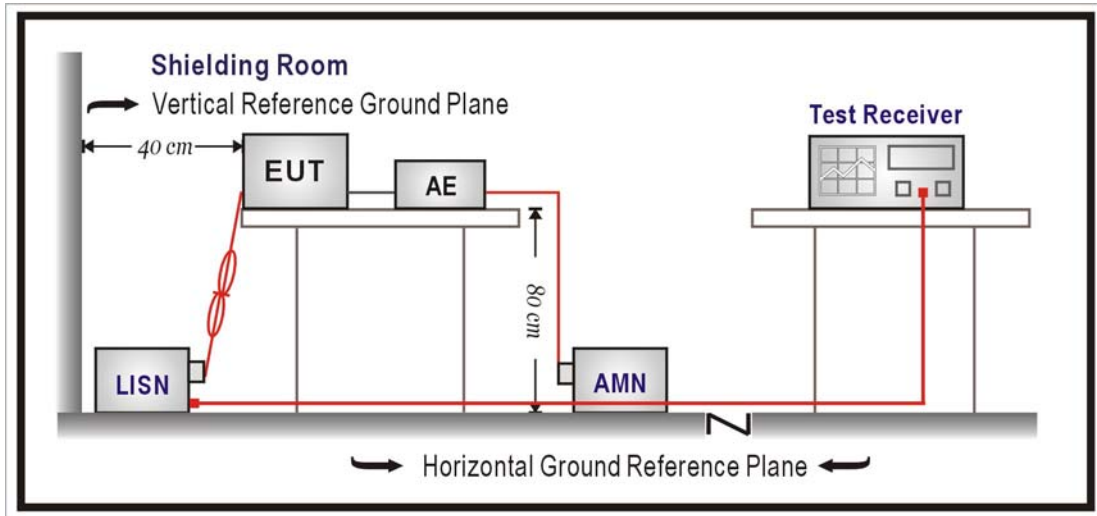
2402MHz



Date: 14.JAN.2018 02:51:33

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

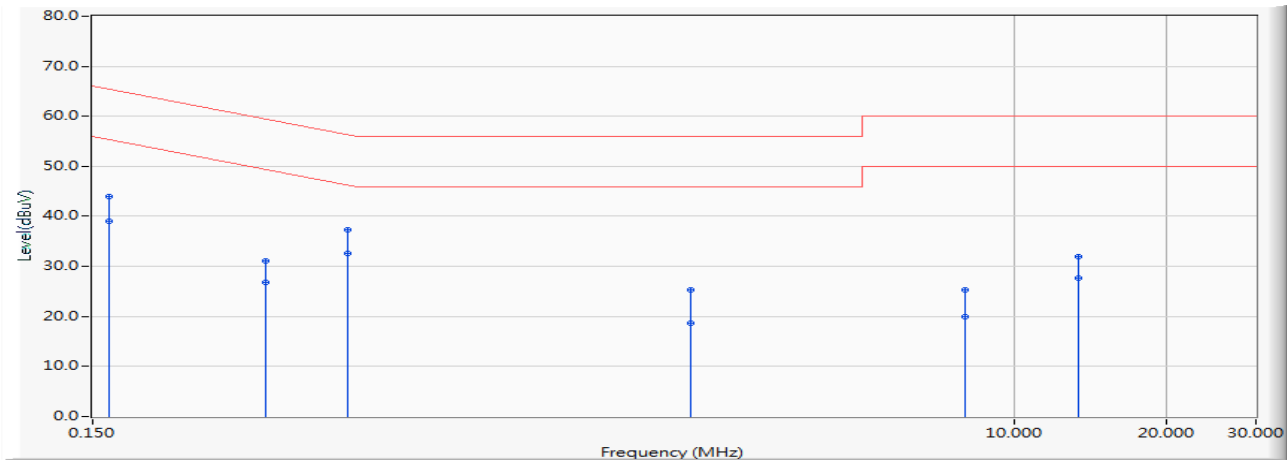
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.207: 2016

2.5. Test Result

Site : SR2-H	Time : 2018/01/25
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A)-6_0712 - Line1	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz

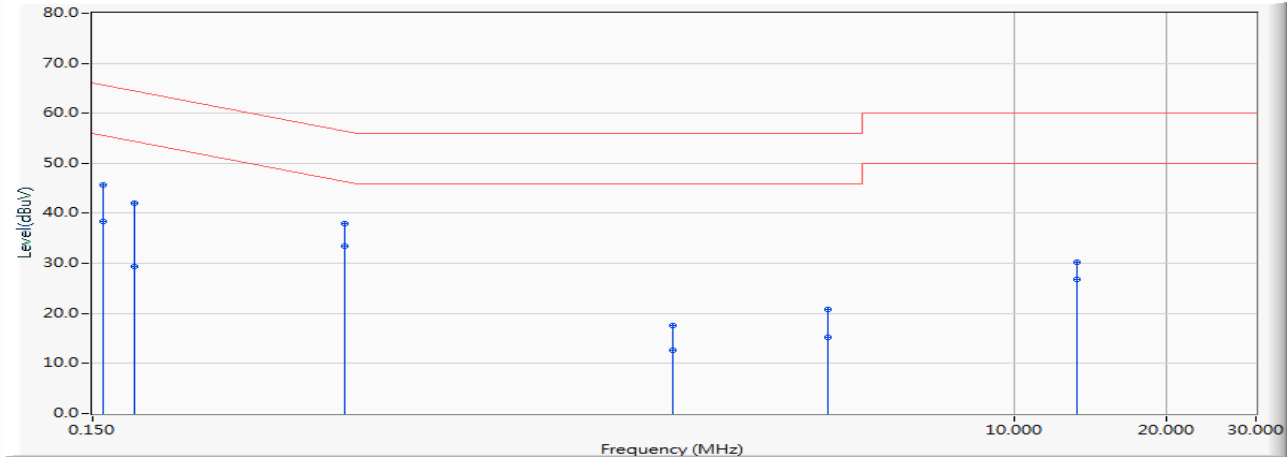


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.162	9.754	34.120	43.874	-21.501	65.375	QUASPEAK
2	0.162	9.754	29.210	38.964	-16.411	55.375	AVERAGE
3	0.330	9.737	21.400	31.137	-28.322	59.459	QUASPEAK
4	0.330	9.737	17.130	26.867	-22.592	49.459	AVERAGE
5	0.478	9.729	27.680	37.409	-18.963	56.372	QUASPEAK
6	* 0.478	9.729	22.930	32.659	-13.713	46.372	AVERAGE
7	2.283	9.869	15.480	25.349	-30.651	56.000	QUASPEAK
8	2.283	9.869	8.820	18.689	-27.311	46.000	AVERAGE
9	7.970	10.046	15.330	25.375	-34.625	60.000	QUASPEAK
10	7.970	10.046	9.870	19.915	-30.085	50.000	AVERAGE
11	13.377	10.191	21.760	31.951	-28.049	60.000	QUASPEAK
12	13.377	10.191	17.370	27.561	-22.439	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2-H	Time : 2018/01/25
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A)-6_0712 - Line2	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz



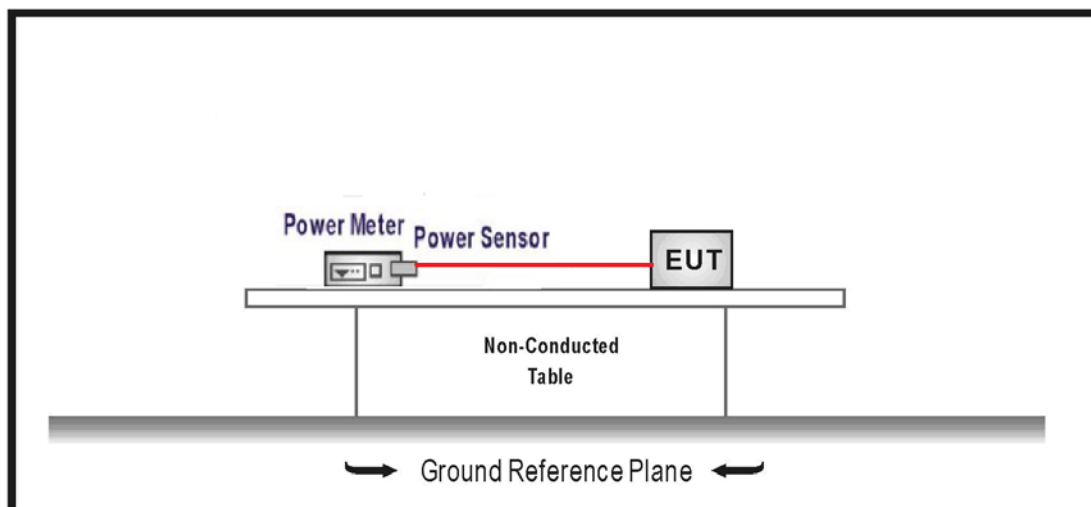
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.158	9.751	35.830	45.581	-19.997	65.578	QUASPEAK
2	0.158	9.751	28.560	38.311	-17.267	55.578	AVERAGE
3	0.181	9.752	32.210	41.962	-22.466	64.428	QUASPEAK
4	0.181	9.752	19.540	29.292	-25.136	54.428	AVERAGE
5	0.474	9.746	28.290	38.036	-18.403	56.440	QUASPEAK
6	*	9.746	23.620	33.366	-13.073	46.440	AVERAGE
7	2.103	9.850	7.730	17.580	-38.420	56.000	QUASPEAK
8	2.103	9.850	2.840	12.690	-33.310	46.000	AVERAGE
9	4.259	9.845	11.000	20.845	-35.155	56.000	QUASPEAK
10	4.259	9.845	5.290	15.135	-30.865	46.000	AVERAGE
11	13.252	10.254	19.960	30.214	-29.786	60.000	QUASPEAK
12	13.252	10.254	16.650	26.904	-23.096	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

3. Peak Power Output

3.1. Test Setup



3.2. Test procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB558074 D01V04 for compliance to FCC 47CFR 15.247 requirements.

3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

3.5. Test Result

Product	Bluetooth USB Adapter		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit Mode		
Date of Test	2018/01/17	Test Site	SR10-H

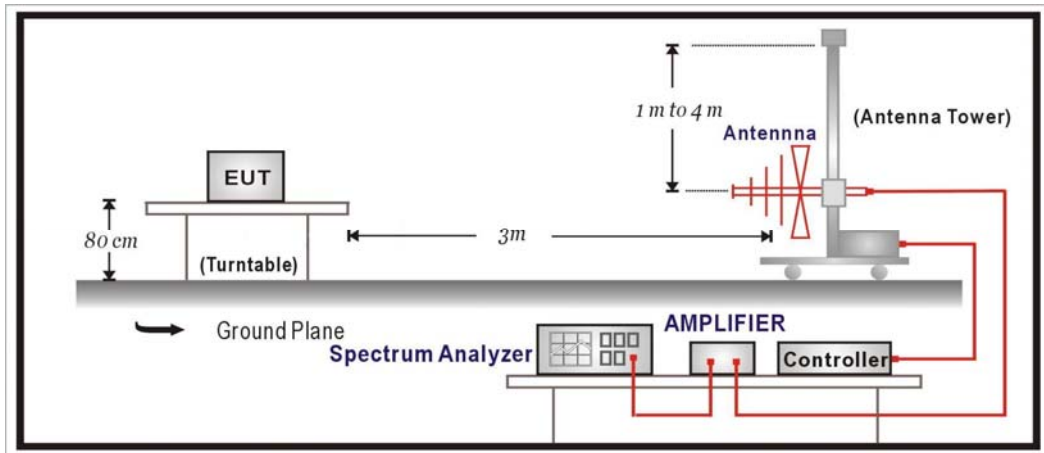
GFSK

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2402	3.950	30	Pass
19	2440	5.960	30	Pass
39	2480	6.110	30	Pass

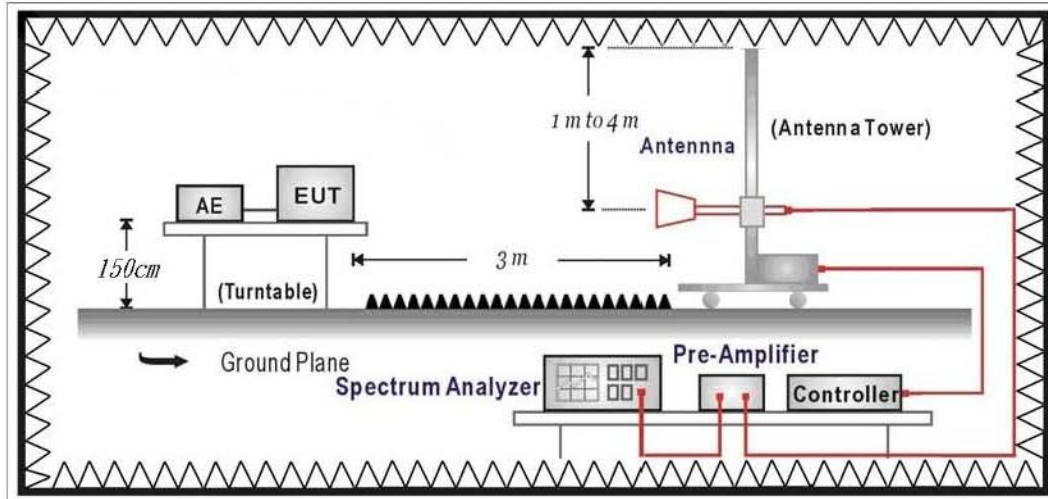
4. Radiated Emission

4.1. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	uV/m	dBuV/m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

- Remarks :
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
 2. In the Above Table, the tighter limit applies at the band edges.
 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 D01V04 for compliance to FCC 47CFR 15.247 requirements. The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

On any frequency or frequencies from 9KHz(include The the lowest oscillator frequency generated within the device up to the 10th harmonic) to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

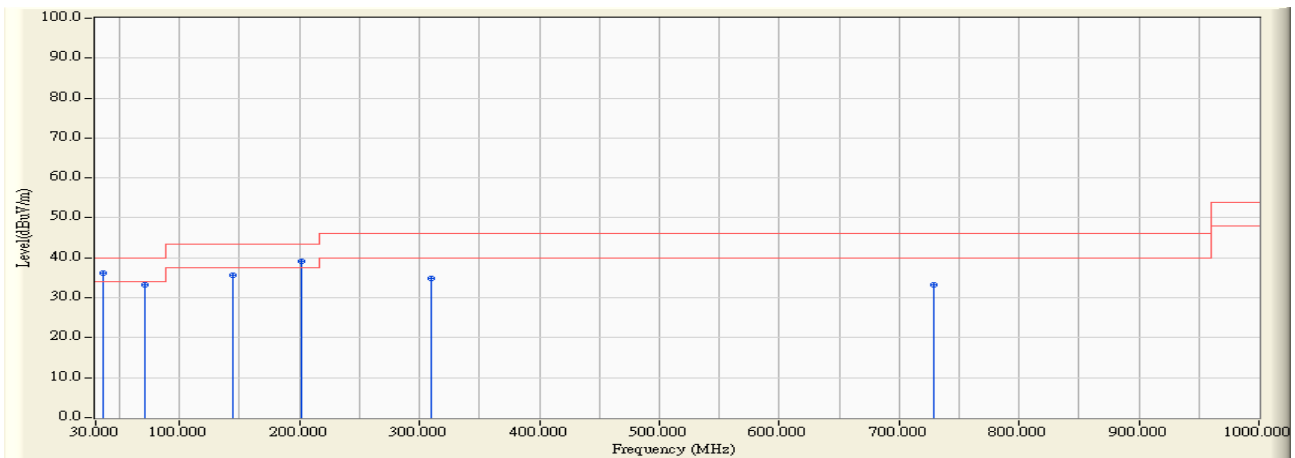
4.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247

4.5. Test Result

30MHz-1GHz Spurious

Site : CB4-H	Time : 2018/01/16
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz

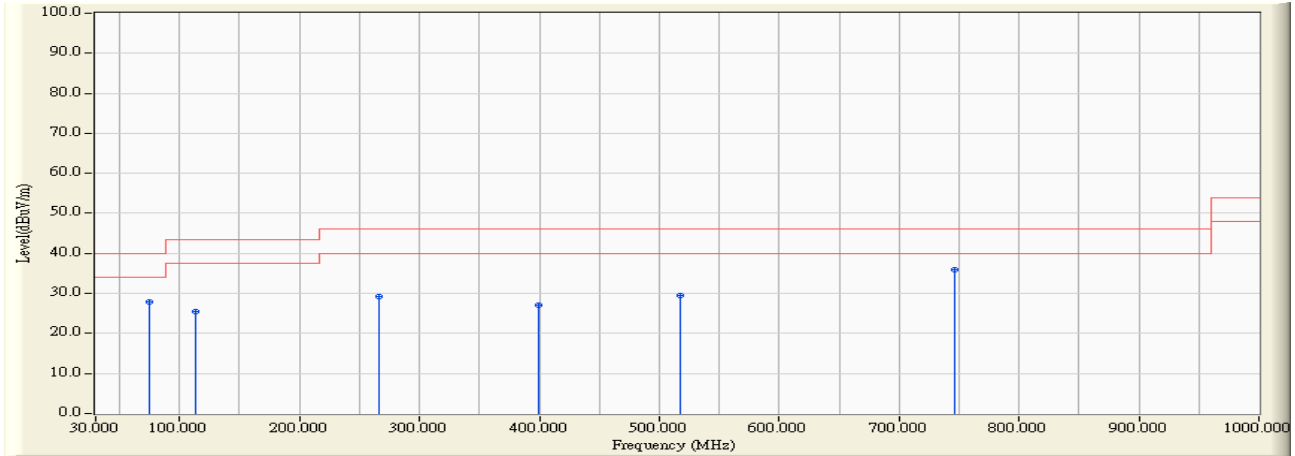


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	35.917	-14.329	50.613	36.285	-3.715	40.000	QUASPEAK
2		71.031	-26.363	59.606	33.244	-6.756	40.000	QUASPEAK
3		143.878	-21.559	57.322	35.763	-7.737	43.500	QUASPEAK
4		201.981	-22.574	61.817	39.243	-4.257	43.500	QUASPEAK
5		310.136	-19.481	54.424	34.943	-11.057	46.000	QUASPEAK
6		729.079	-12.021	45.360	33.338	-12.662	46.000	QUASPEAK

Note:

1. All Reading Levels is Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The Emission under 30MHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/16
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB4 FCC EFS_S2_30M-1GHz_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz



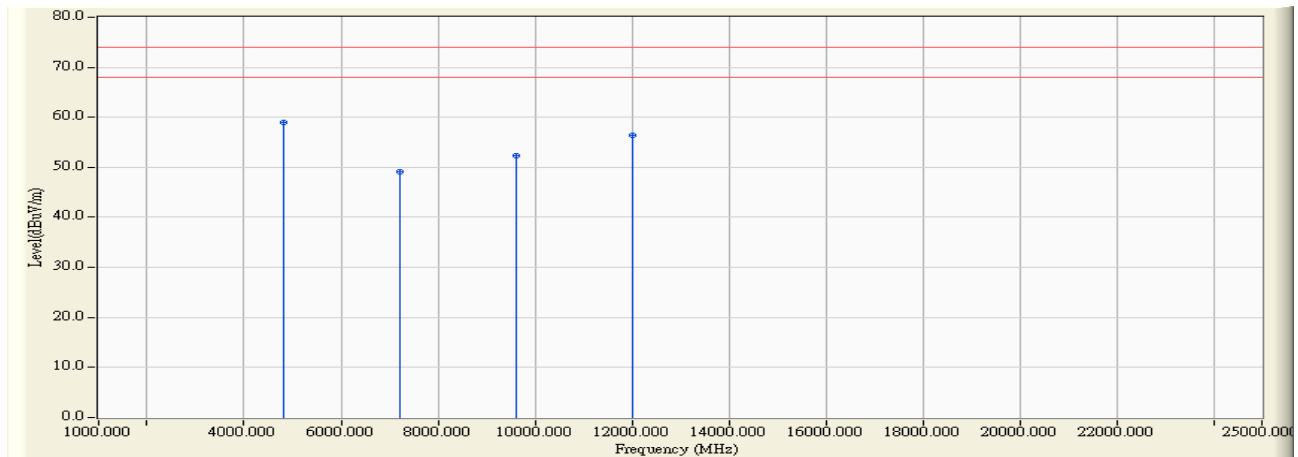
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	75.299	-26.392	54.145	27.753	-12.247	40.000	QUASPEAK
2	113.517	-21.456	46.978	25.522	-17.978	43.500	QUASPEAK
3	266.486	-20.184	49.470	29.286	-16.714	46.000	QUASPEAK
4	399.667	-16.339	43.524	27.185	-18.815	46.000	QUASPEAK
5	517.425	-14.240	43.756	29.515	-16.485	46.000	QUASPEAK
6	* 746.927	-11.809	47.648	35.838	-10.162	46.000	QUASPEAK

Note:

1. All Reading Levels is Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The Emission under 30MHz were not included is because their levels are too low.

Harmonic & Spurious:

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2402MHz

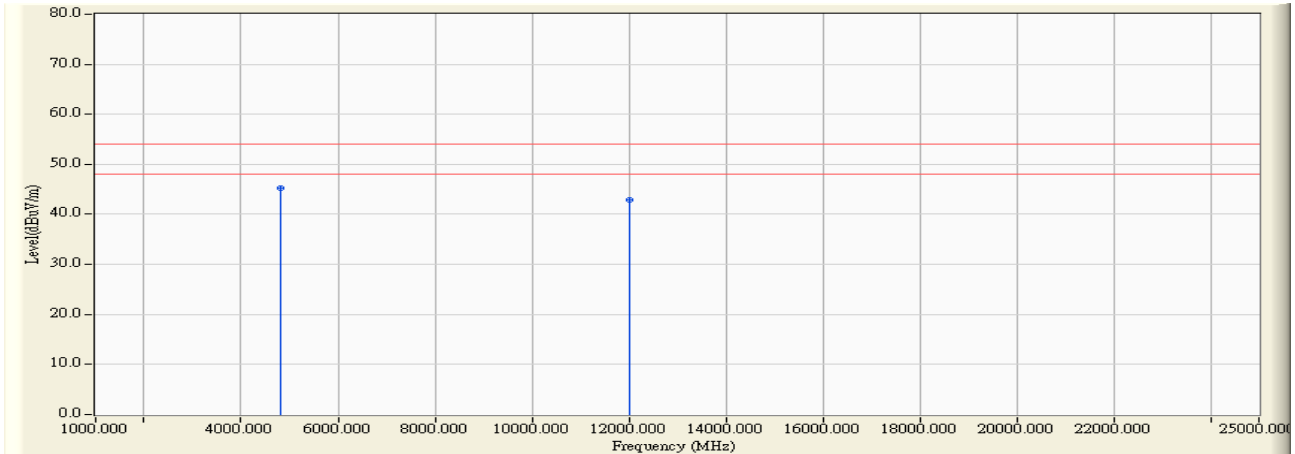


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4804.000	7.385	51.670	59.055	-14.945	74.000	PEAK
2		7206.000	15.910	33.250	49.161	-24.839	74.000	PEAK
3		9608.000	21.731	30.660	52.392	-21.608	74.000	PEAK
4		12010.000	26.133	30.170	56.303	-17.697	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2402MHz

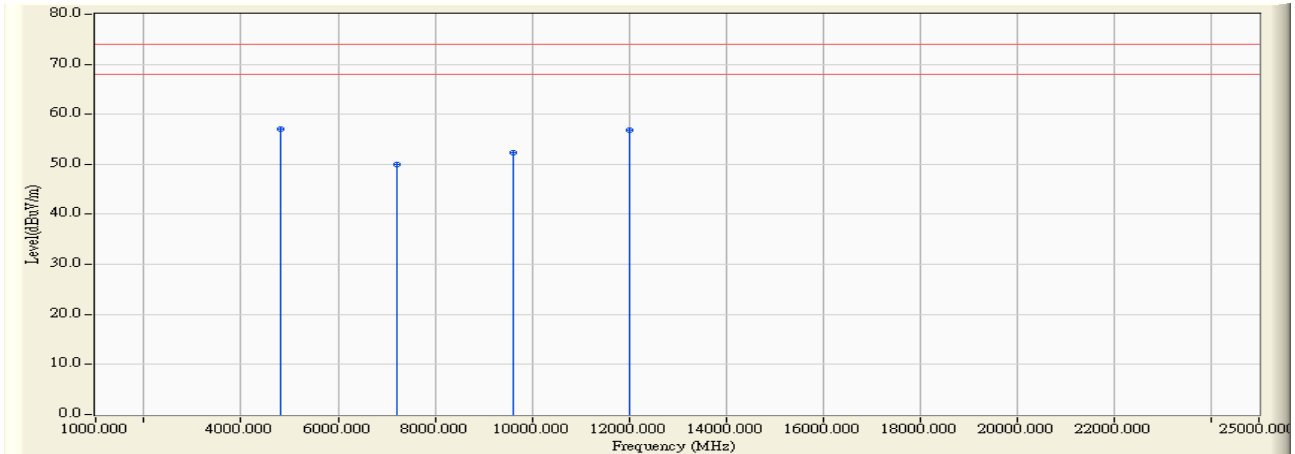


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4804.000	7.385	37.820	45.205	-8.795	54.000	AVERAGE
2		12010.000	26.133	16.730	42.863	-11.137	54.000	AVERAGE

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2402MHz

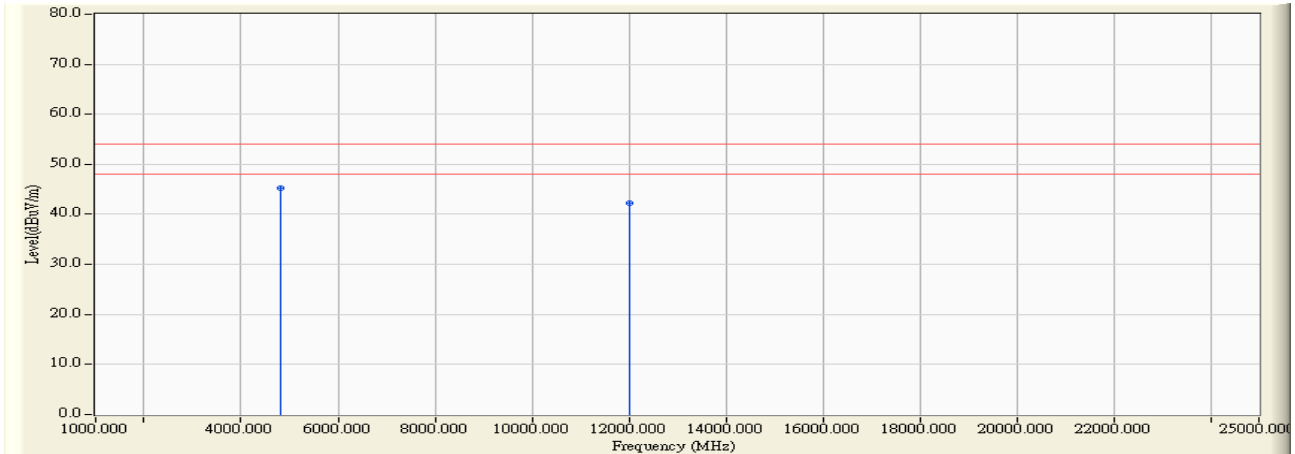


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4804.000	7.385	49.570	56.955	-17.045	74.000	PEAK
2		7206.000	15.910	33.960	49.871	-24.129	74.000	PEAK
3		9608.000	21.731	30.560	52.292	-21.708	74.000	PEAK
4		12010.000	26.133	30.690	56.823	-17.177	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2402MHz

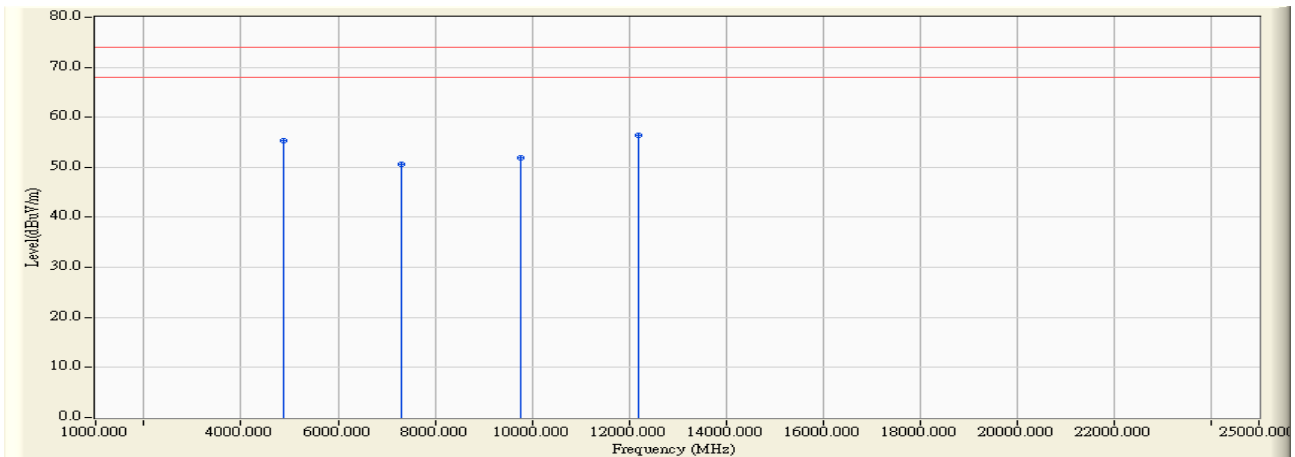


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4804.000	7.385	37.780	45.165	-8.835	54.000	AVERAGE
2		12010.000	26.133	16.200	42.333	-11.667	54.000	AVERAGE

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz

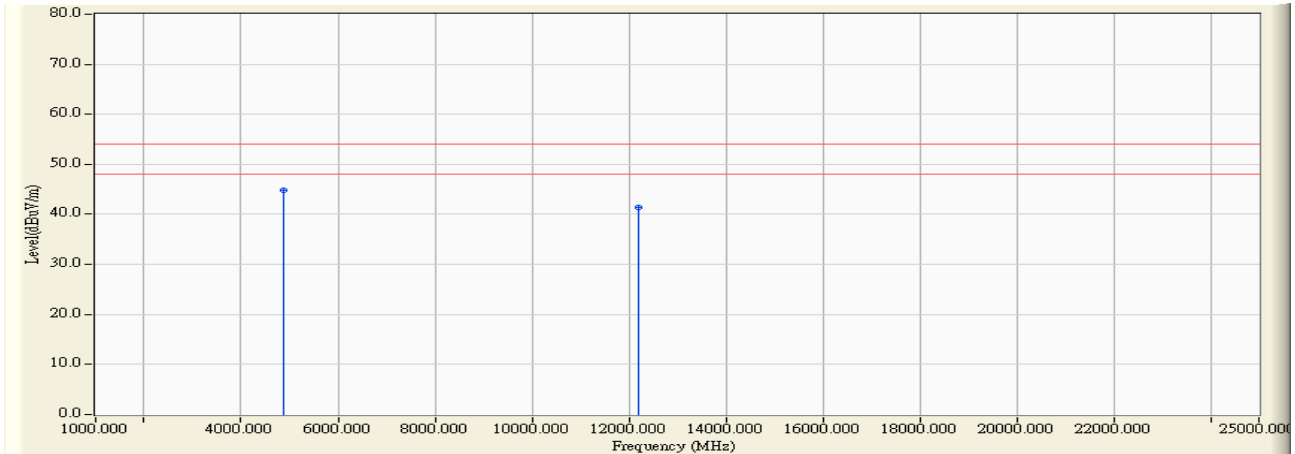


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4880.000	7.573	47.750	55.323	-18.677	74.000	PEAK
2		7320.000	16.427	34.120	50.547	-23.453	74.000	PEAK
3		9760.000	22.159	29.730	51.889	-22.111	74.000	PEAK
4	*	12200.000	25.775	30.670	56.445	-17.555	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz

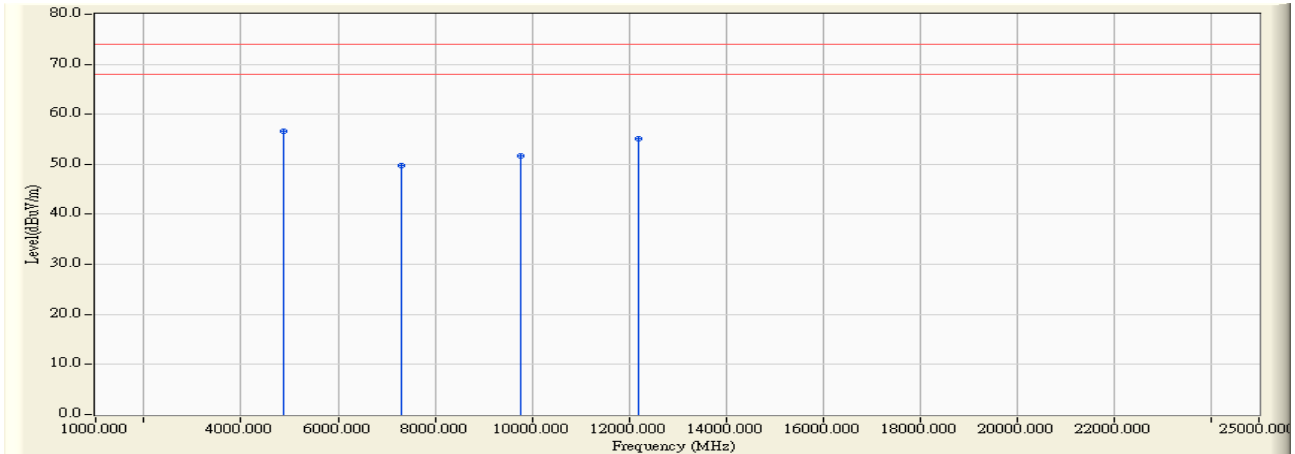


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4880.000	7.573	37.330	44.903	-9.097	54.000	AVERAGE
2		12200.000	25.775	15.720	41.495	-12.505	54.000	AVERAGE

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz

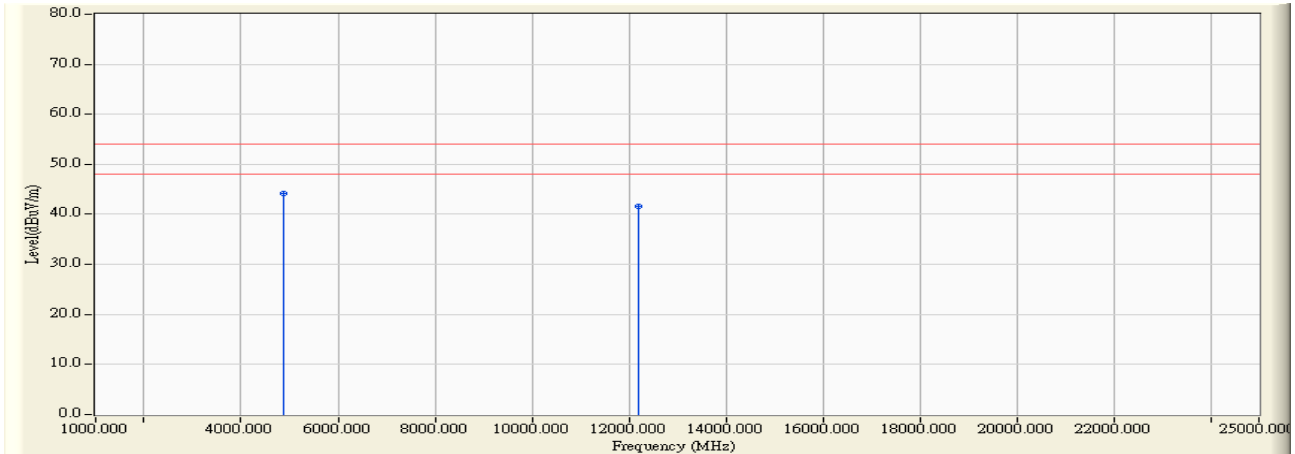


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4880.000	7.573	49.140	56.713	-17.287	74.000	PEAK
2		7320.000	16.427	33.410	49.837	-24.163	74.000	PEAK
3		9760.000	22.159	29.530	51.689	-22.311	74.000	PEAK
4		12200.000	25.775	29.300	55.075	-18.925	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz

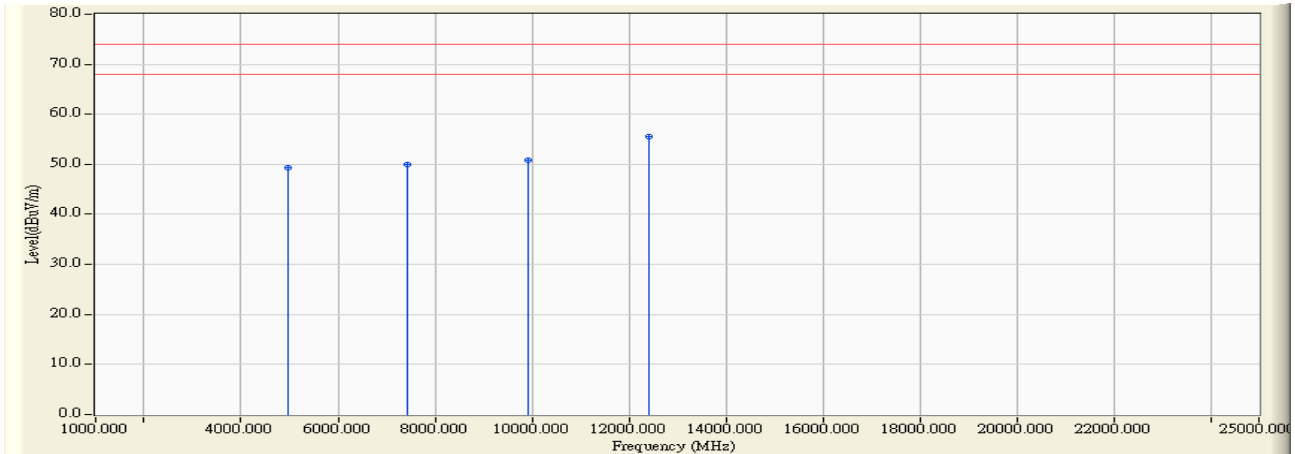


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4880.000	7.573	36.520	44.093	-9.907	54.000	AVERAGE
2		12200.000	25.775	15.880	41.655	-12.345	54.000	AVERAGE

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2480MHz

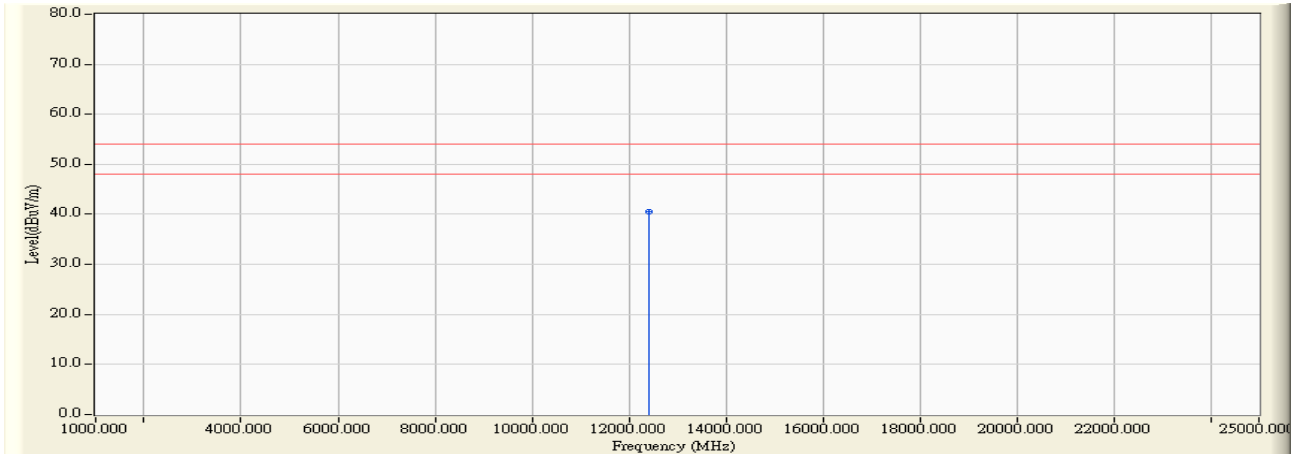


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	7.771	41.600	49.371	-24.629	74.000	PEAK
2		7440.000	16.948	33.020	49.968	-24.032	74.000	PEAK
3		9920.000	22.512	28.400	50.912	-23.088	74.000	PEAK
4	*	12400.000	25.408	30.130	55.538	-18.462	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2480MHz

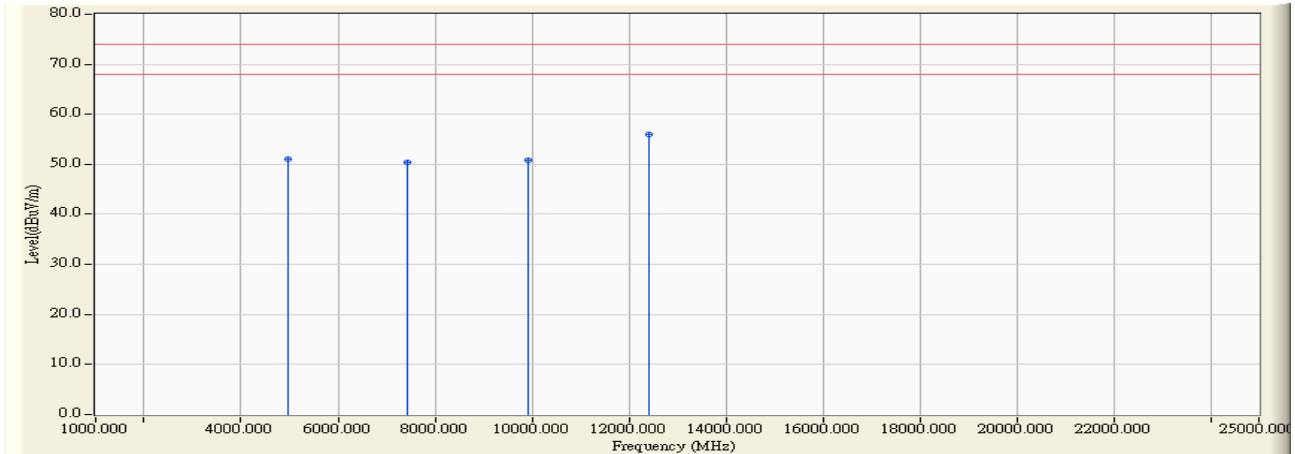


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	12400.000	25.408	15.230	40.638	-13.362	54.000	AVERAGE

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2480MHz

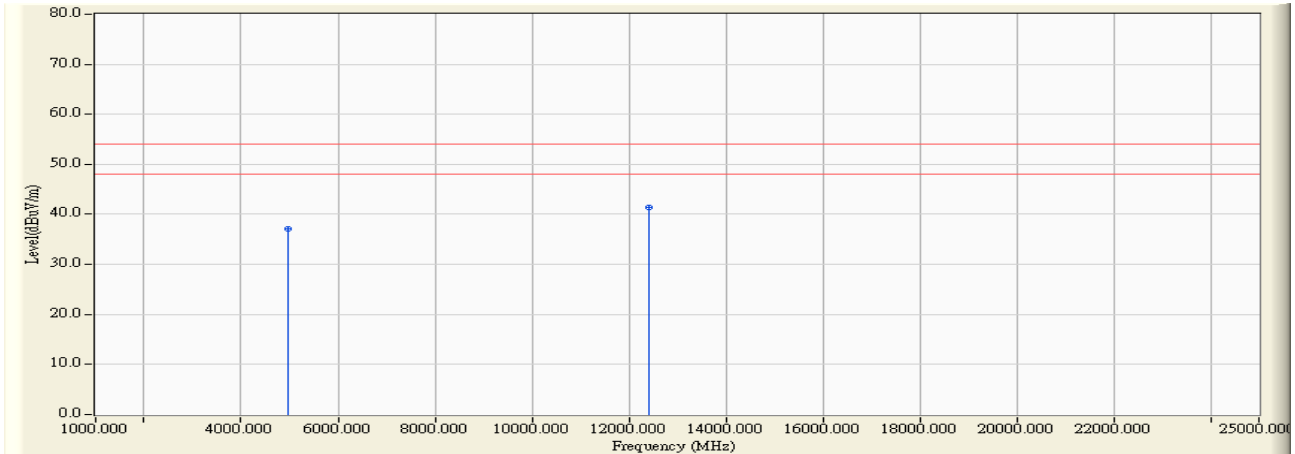


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	7.771	43.250	51.021	-22.979	74.000	PEAK
2		7440.000	16.948	33.480	50.428	-23.572	74.000	PEAK
3		9920.000	22.512	28.420	50.932	-23.068	74.000	PEAK
4	*	12400.000	25.408	30.640	56.048	-17.952	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB4-H	Time : 2018/01/04
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2480MHz



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	7.771	29.240	37.011	-16.989	54.000	AVERAGE
2	*	12400.000	25.408	15.950	41.358	-12.642	54.000	AVERAGE

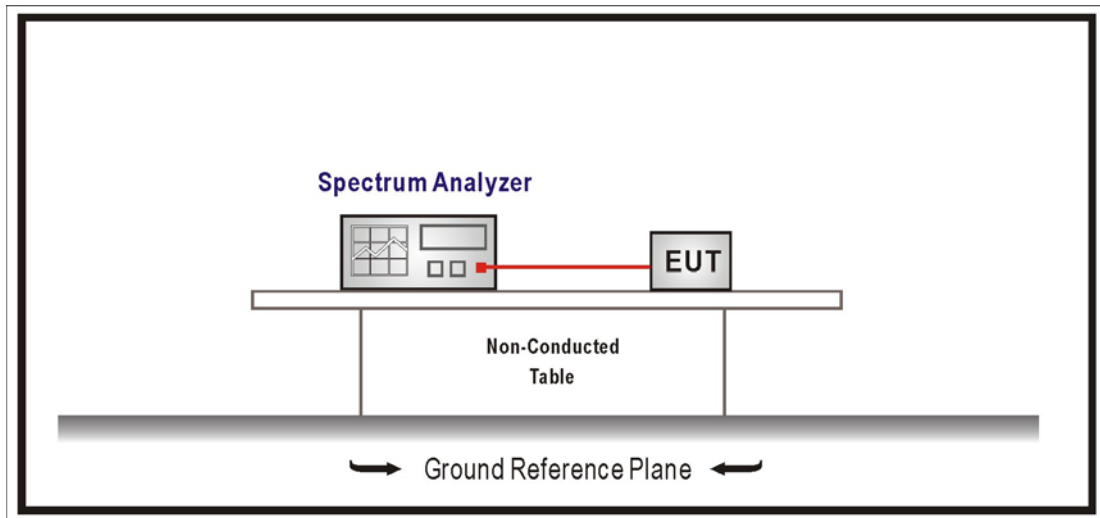
Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

5. RF antenna conducted test

5.1. Test Setup

RF Conducted Measurement:



5.2. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 D01V04 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

5.4. Test Specification

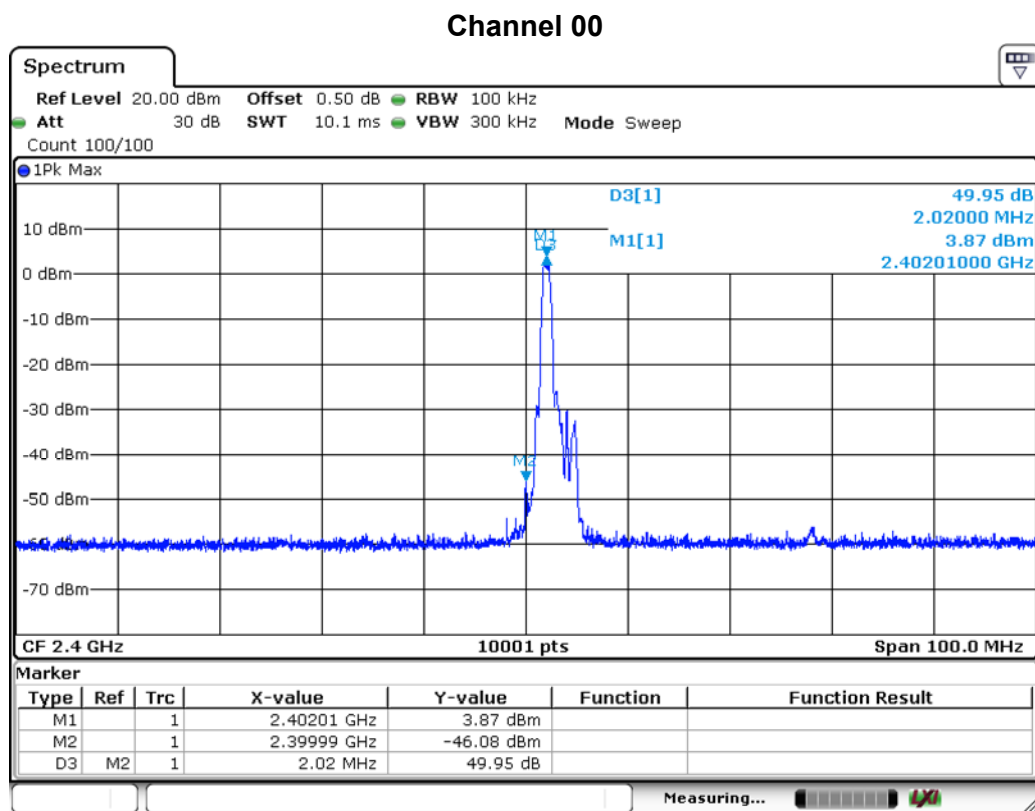
According to FCC Part 15 Subpart C Paragraph 15.247.

5.5. Test Result

Product	Bluetooth USB Adapter		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode		
Date of Test	2018/01/14	Test Site	SR10-H

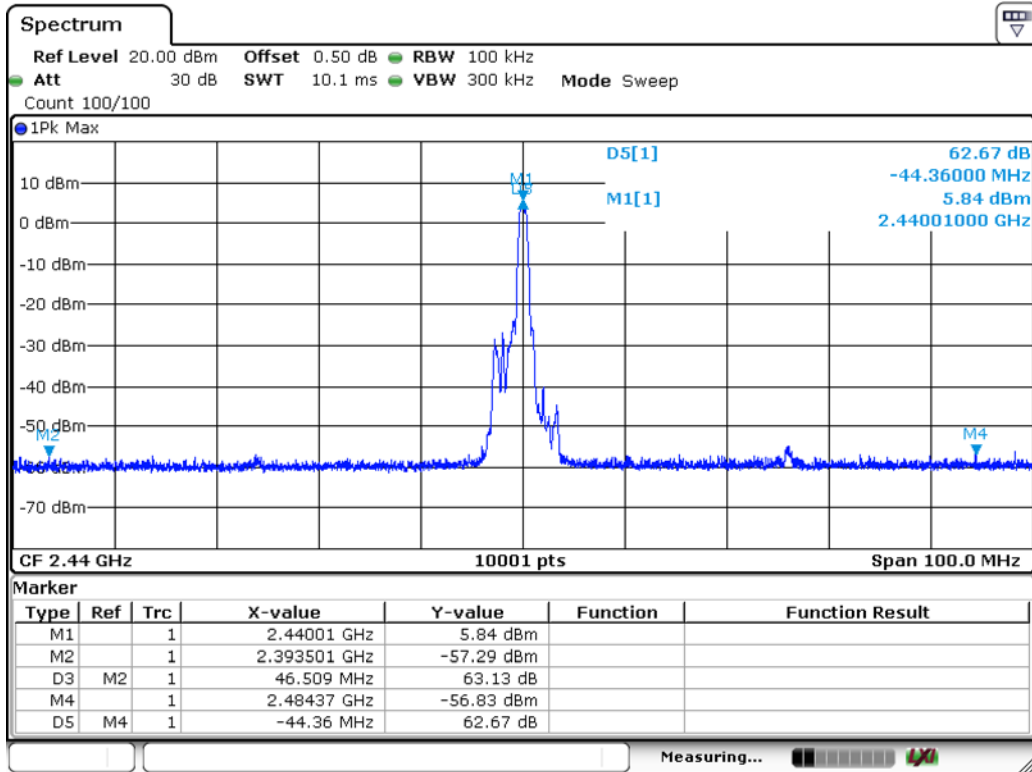
GFSK

Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
00	2402	49.950	≥ 20	Pass
19	2440	62.670	≥ 20	Pass
39	2480	58.620	≥ 20	Pass



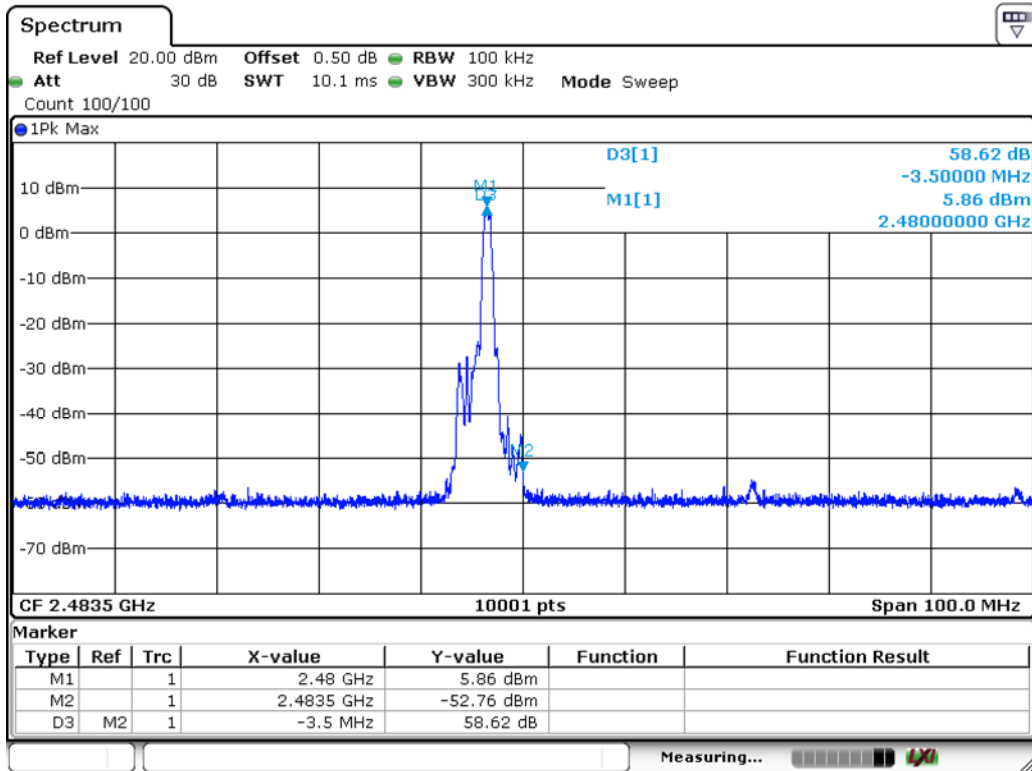
Date: 14.JAN.2018 02:38:56

Channel 19



Date: 14.JAN.2018 02:40:57

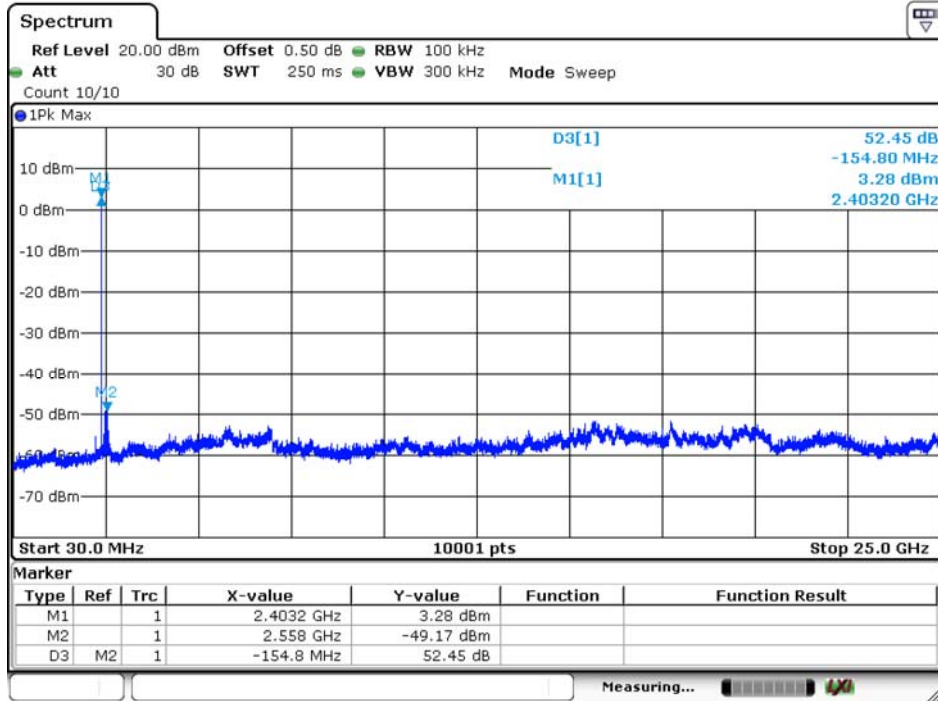
Channel 39



Date: 14.JAN.2018 02:39:52

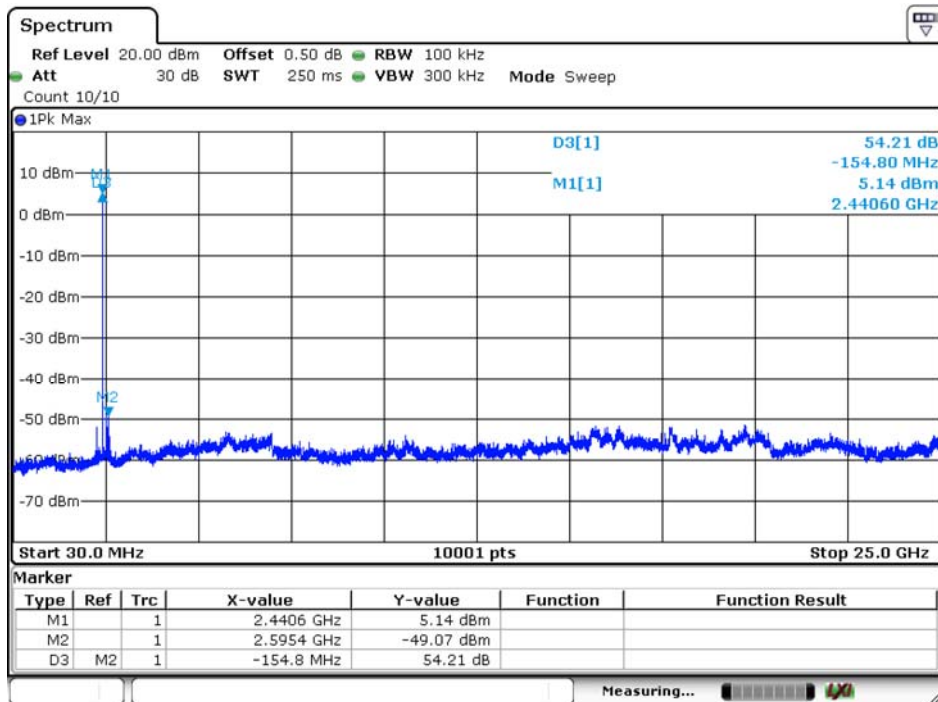
Product	Bluetooth USB Adapter		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit Mode		
Date of Test	2018/01/14	Test Site	SR10-H

Channel 00 (30MHz-25GHz)- GFSK



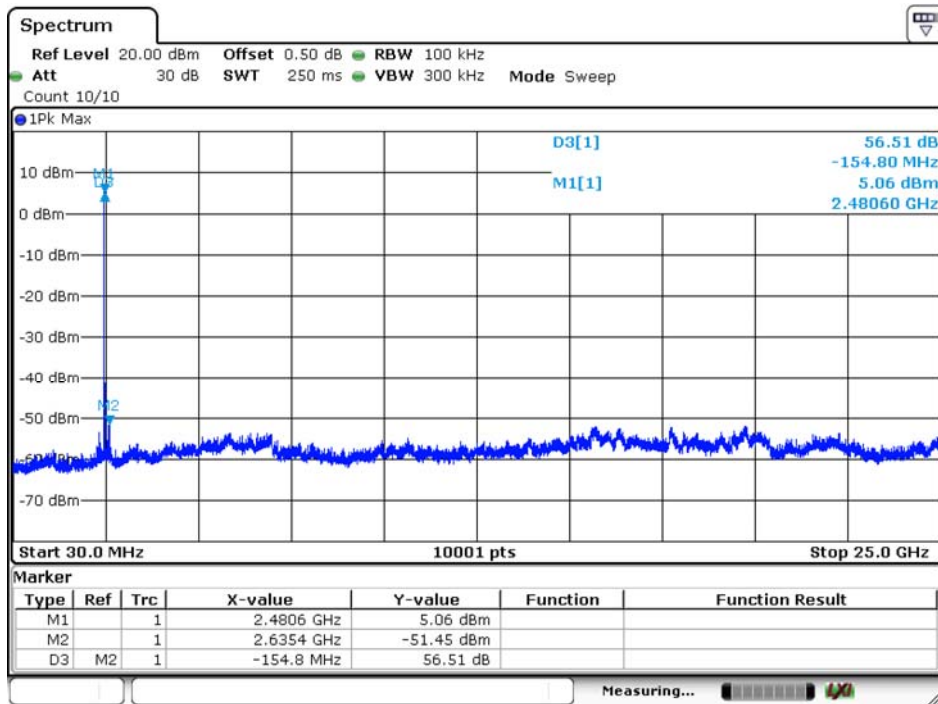
Date: 14. JAN. 2018 02:43:21

Channel 19 (30MHz-25GHz)- GFSK



Date: 14. JAN. 2018 02:42:31

Channel 39 (30MHz-25GHz)- GFSK

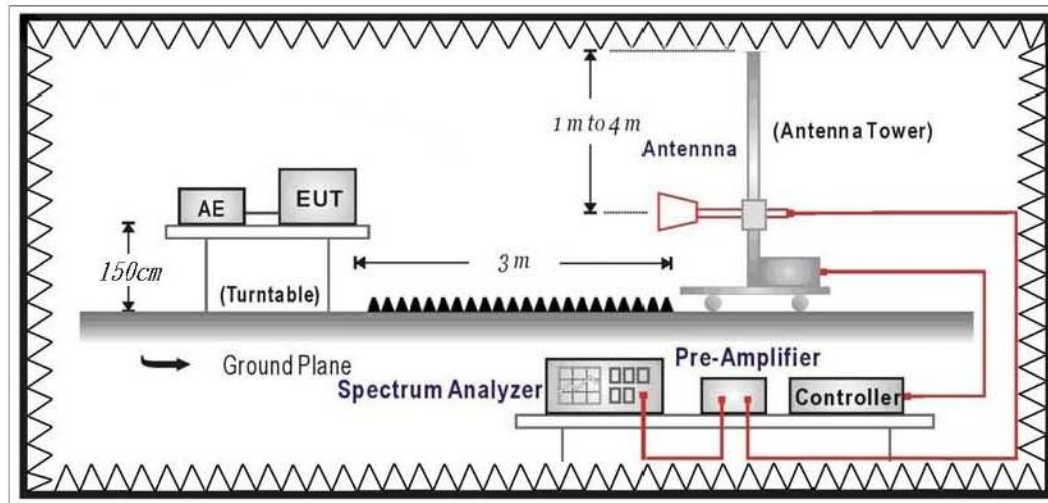


Date: 14. JAN. 2018 02:43:59

6. Band Edge

6.1. Test Setup

RF Radiated Measurement:



6.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 D01V04 for compliance to FCC 47CFR 15.247 requirements. The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

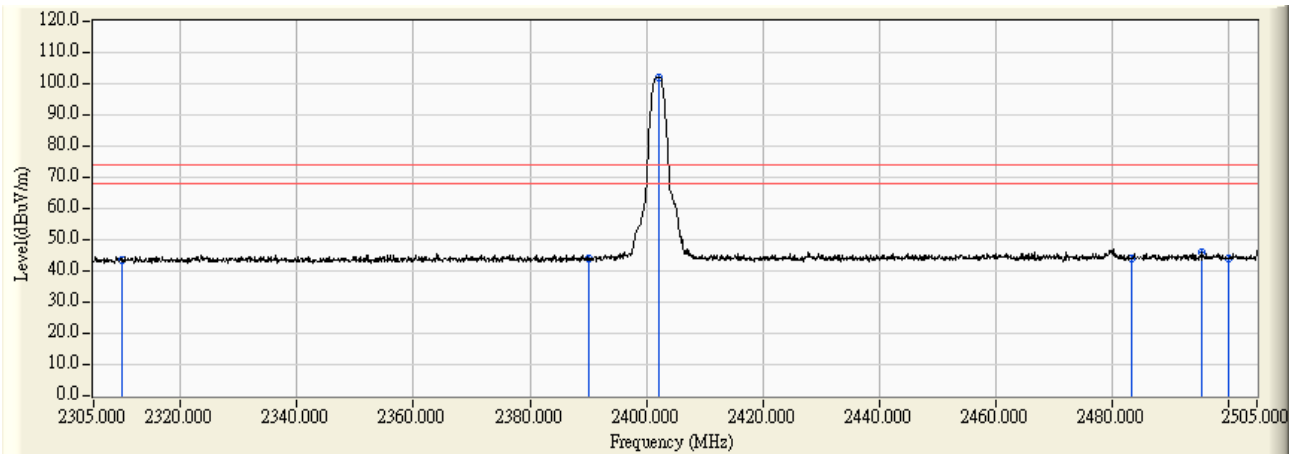
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

6.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

6.5. Test Result

Site : CB4-H	Time : 2018/01/05
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2402MHz

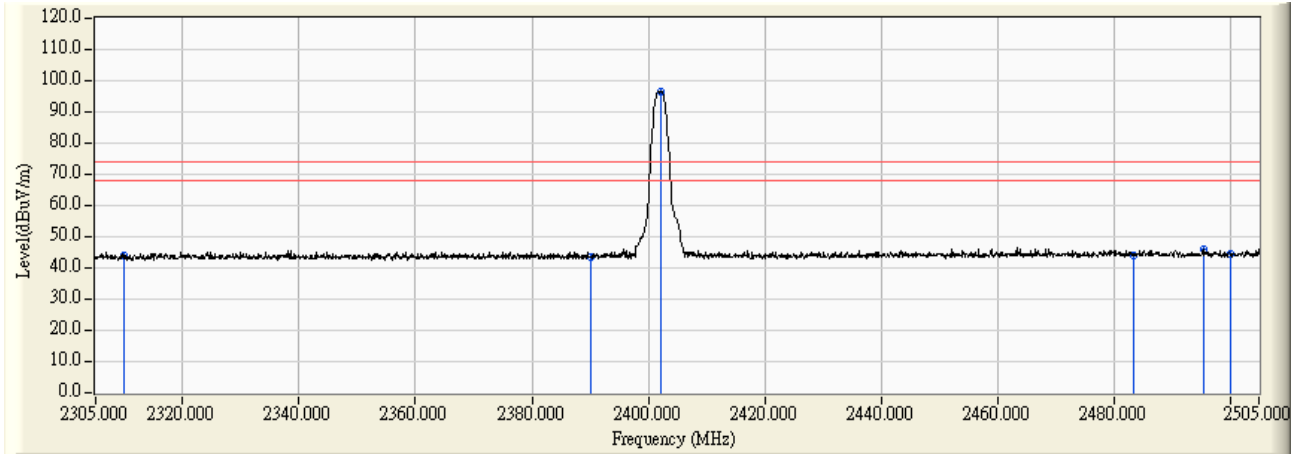


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	13.556	29.966	43.522	-30.478	74.000	PEAK
2	2390.000	14.009	30.108	44.117	-29.883	74.000	PEAK
3	* 2402.200	14.078	88.160	102.238	28.238	74.000	PEAK
4	2483.500	14.538	29.408	43.947	-30.053	74.000	PEAK
5	2495.500	14.607	31.180	45.787	-28.213	74.000	PEAK
6	2500.000	14.631	29.455	44.086	-29.914	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
7. The fundamental for reference only, it's not restricted by unwanted emission limit.

Site : CB4-H	Time : 2018/01/05
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2402MHz

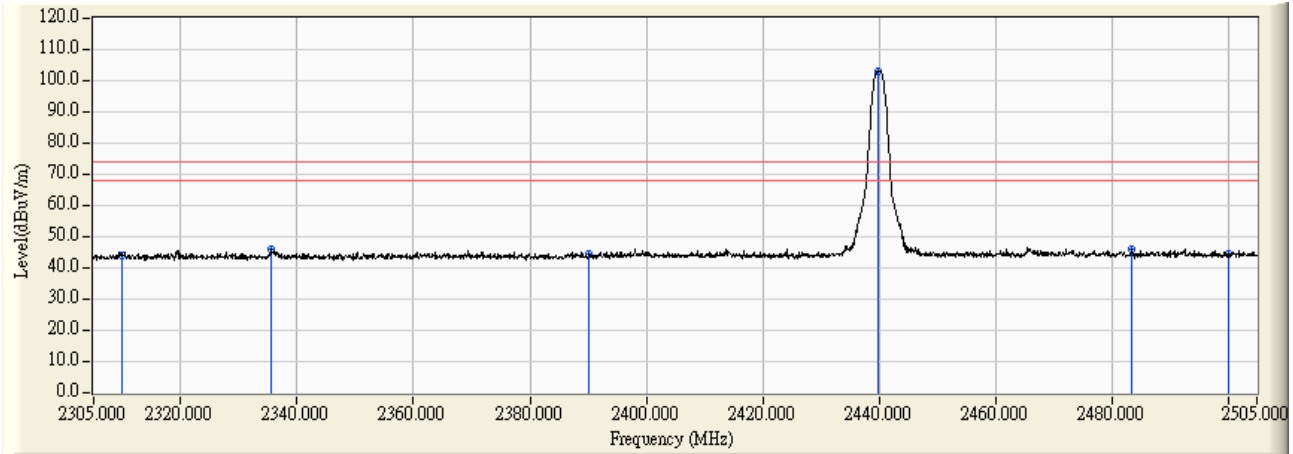


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	13.556	30.355	43.911	-30.089	74.000	PEAK
2	2390.000	14.009	29.700	43.709	-30.291	74.000	PEAK
3	* 2402.300	14.079	82.631	96.710	22.710	74.000	PEAK
4	2483.500	14.538	29.642	44.181	-29.819	74.000	PEAK
5	2495.500	14.607	31.272	45.879	-28.121	74.000	PEAK
6	2500.000	14.631	29.809	44.440	-29.560	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
7. The fundamental for reference only, it's not restricted by unwanted emission limit.

Site : CB4-H	Time : 2018/01/05
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz

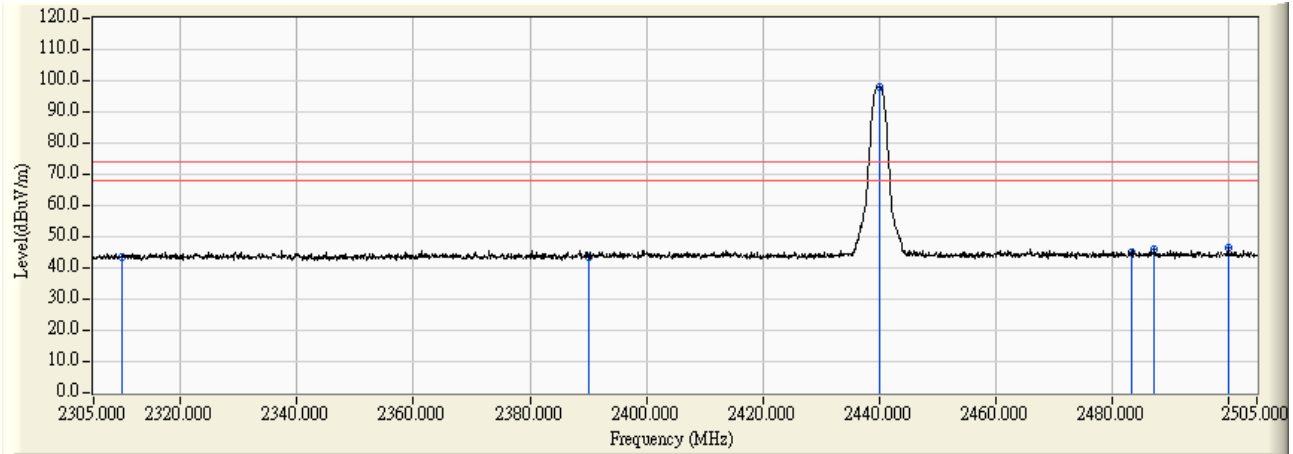


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	13.556	30.381	43.937	-30.063	74.000	PEAK
2	2335.500	13.700	32.180	45.880	-28.120	74.000	PEAK
3	2390.000	14.009	30.554	44.563	-29.437	74.000	PEAK
4	* 2439.800	14.292	88.745	103.036	29.036	74.000	PEAK
5	2483.500	14.538	31.437	45.976	-28.024	74.000	PEAK
6	2500.000	14.631	29.726	44.357	-29.643	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
7. The fundamental for reference only, it's not restricted by unwanted emission limit.

Site : CB4-H	Time : 2018/01/05
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2440MHz

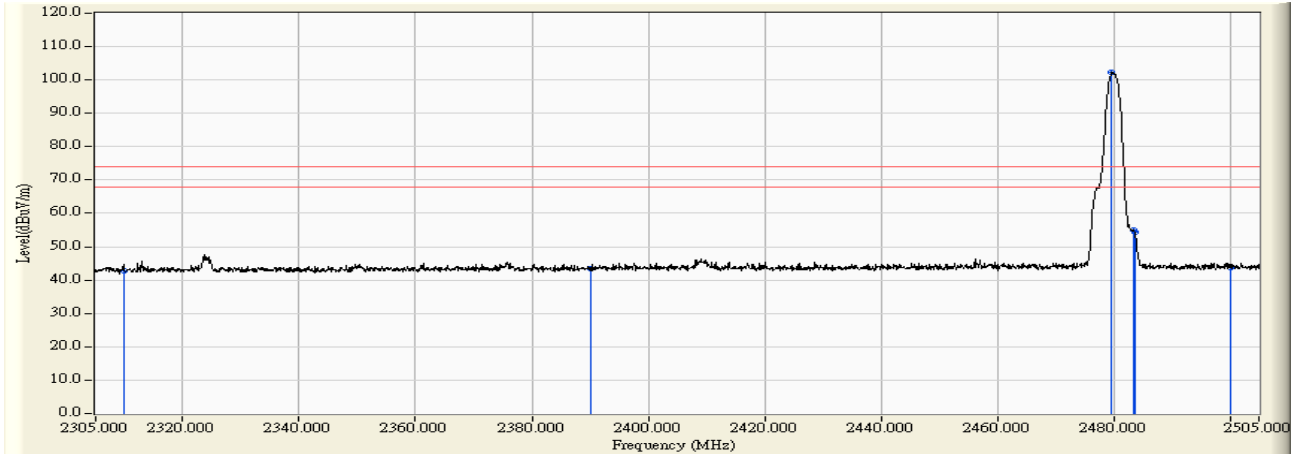


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	13.556	30.090	43.646	-30.354	74.000	PEAK
2	2390.000	14.009	29.262	43.271	-30.729	74.000	PEAK
3	* 2440.000	14.292	83.677	97.969	23.969	74.000	PEAK
4	2483.500	14.538	30.325	44.864	-29.136	74.000	PEAK
5	2487.400	14.561	31.604	46.165	-27.835	74.000	PEAK
6	2500.000	14.631	31.719	46.350	-27.650	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
7. The fundamental for reference only, it's not restricted by unwanted emission limit.

Site : CB4-H	Time : 2018/01/11
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2480MHz

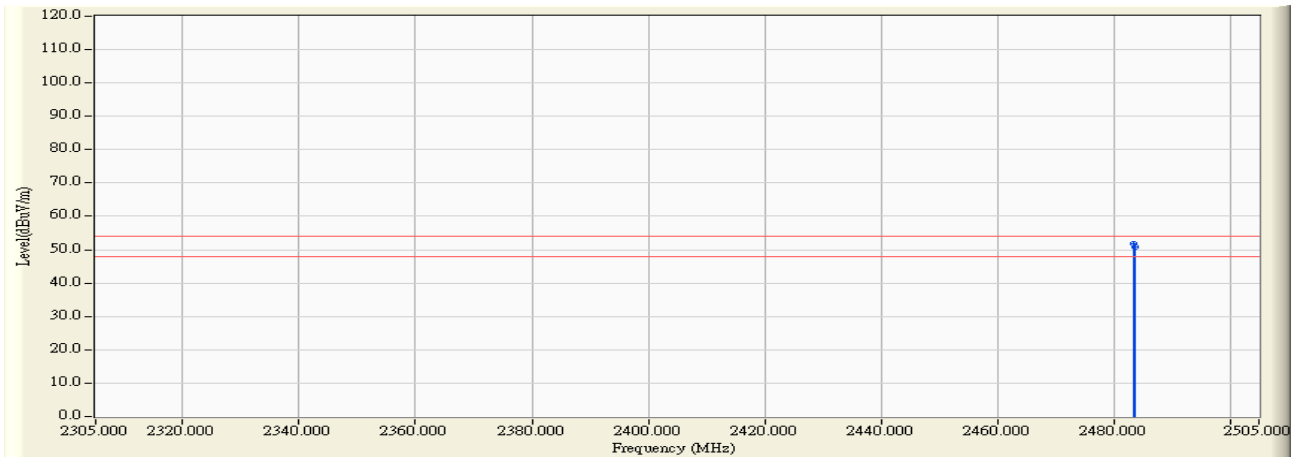


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	13.556	29.153	42.709	-31.291	74.000	PEAK
2	2390.000	14.009	29.276	43.285	-30.715	74.000	PEAK
3	* 2479.700	14.516	87.638	102.155	28.155	74.000	PEAK
4	2483.500	14.538	40.582	55.121	-18.879	74.000	PEAK
5	2483.600	-0.131	54.372	54.241	-19.759	74.000	PEAK
6	2500.000	14.631	29.184	43.815	-30.185	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
7. The fundamental for reference only, it's not restricted by unwanted emission limit.

Site : CB4-H	Time : 2018/01/11
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - HORIZONTAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2480MHz

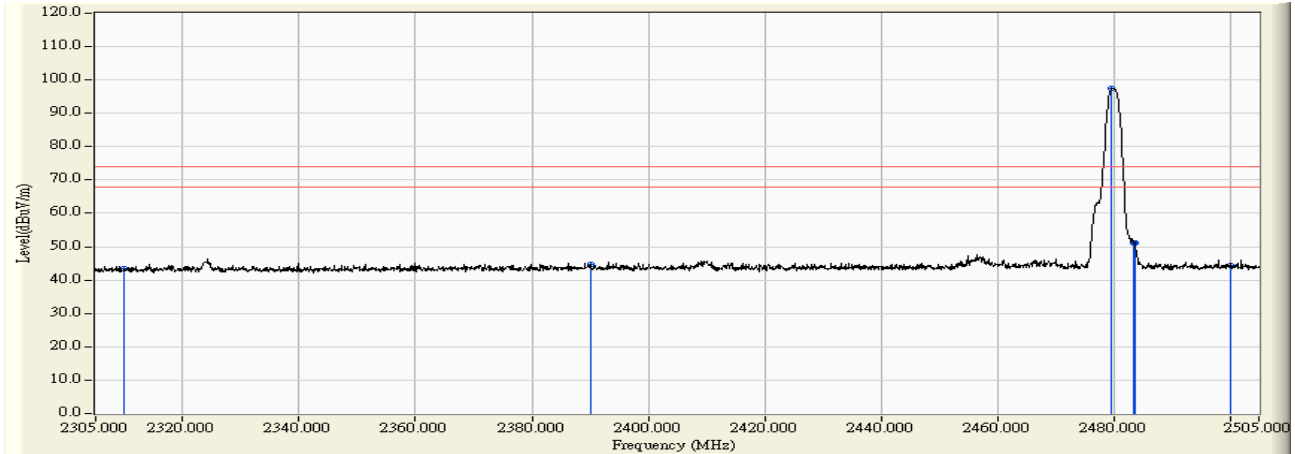


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	2483.500	14.538	37.133	51.672	-2.328	54.000	AVERAGE
2		2483.600	14.539	36.253	50.792	-3.208	54.000	AVERAGE

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
7. The fundamental for reference only, it’s not restricted by unwanted emission limit.

Site : CB4-H	Time : 2018/01/11
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 - VERTICAL	Power : DC 5V (Power by Notebook PC)
EUT : Bluetooth USB Adapter	Note : 802.15.1_BLE_2480MHz



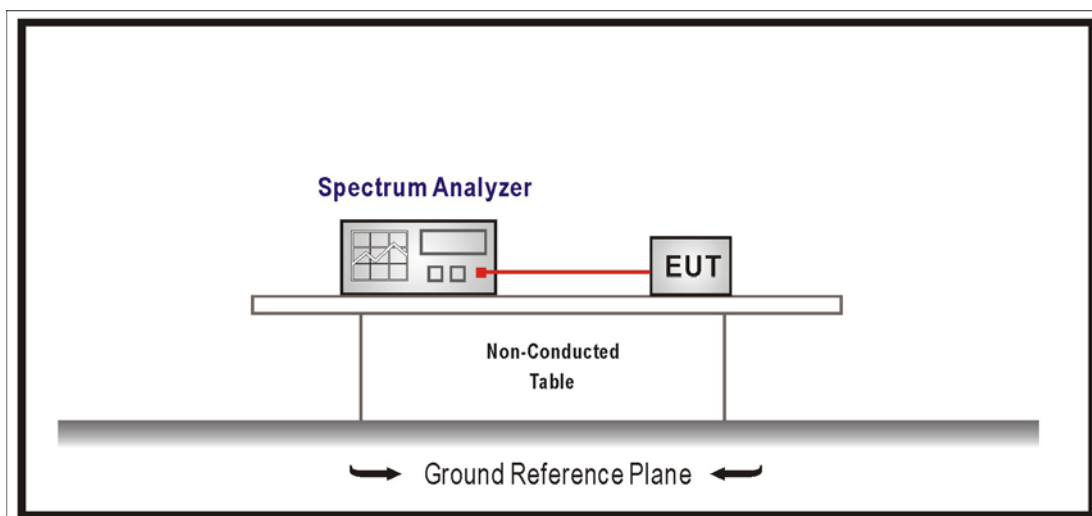
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2310.000	13.556	29.968	43.524	-30.476	74.000	PEAK
2	2390.000	14.009	30.579	44.588	-29.412	74.000	PEAK
3	* 2479.700	14.516	82.980	97.497	23.497	74.000	PEAK
4	2483.500	14.538	36.708	51.247	-22.753	74.000	PEAK
5	2483.600	14.539	36.502	51.041	-22.959	74.000	PEAK
6	2500.000	14.631	29.804	44.435	-29.565	74.000	PEAK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
7. The fundamental for reference only, it's not restricted by unwanted emission limit.

7. Occupied Bandwidth & DTS Bandwidth

7.1. Test Setup



7.2. Limits

The 6 dB bandwidth: ≥ 500 kHz.

Occupied Bandwidth: NA

7.3. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB558074 D01V04 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 1% of EBW, Span greater than RBW.

7.4. Test Specification

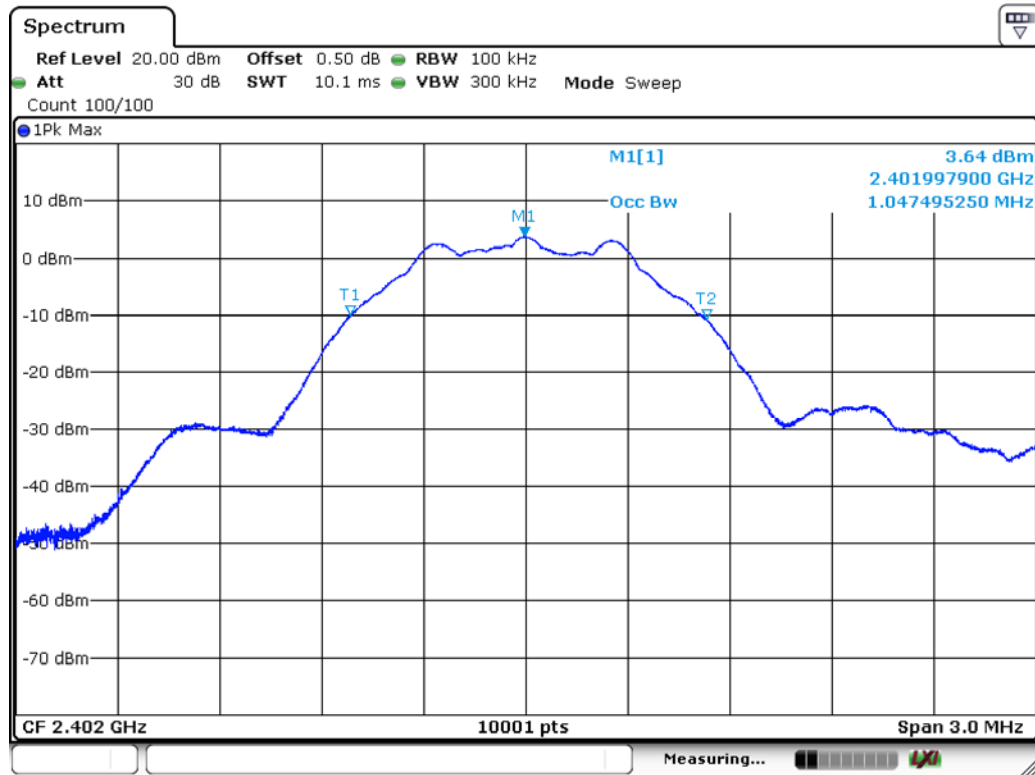
According to FCC Part 15 Subpart C Paragraph 15.247

7.5. Test Result

Product	Bluetooth USB Adapter		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit Mode		
Date of Test	2018/01/14	Test Site	SR10-H

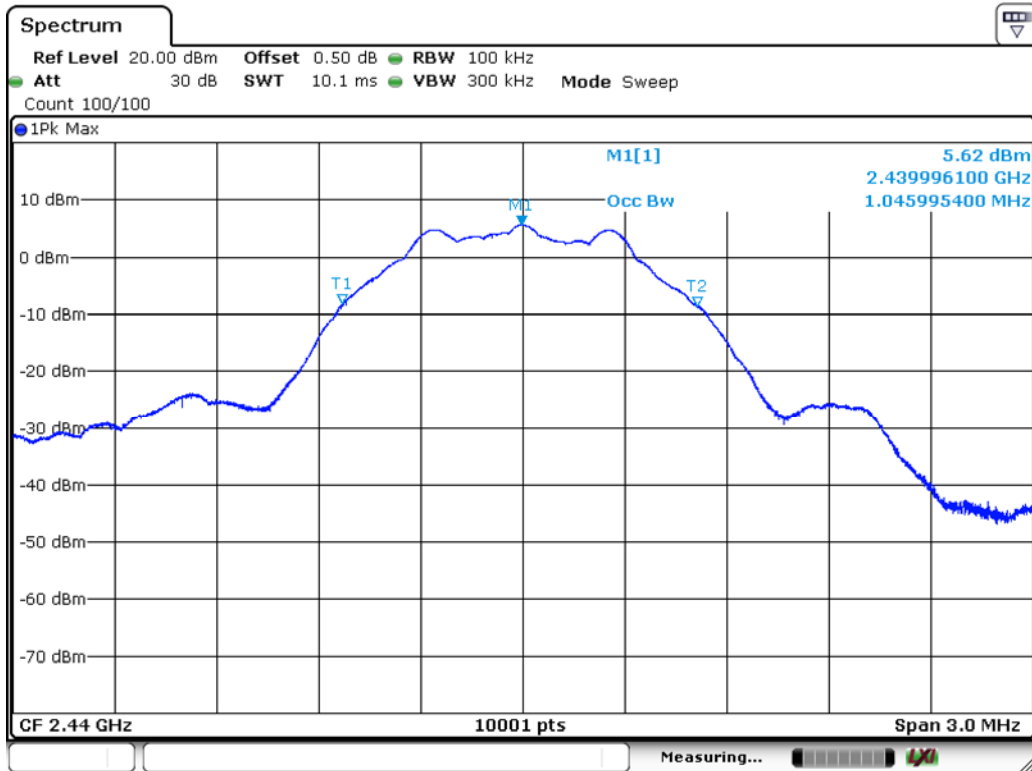
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2402	1.047	--	Pass
19	2440	1.046	--	Pass
39	2480	1.045	--	Pass

Channel 00



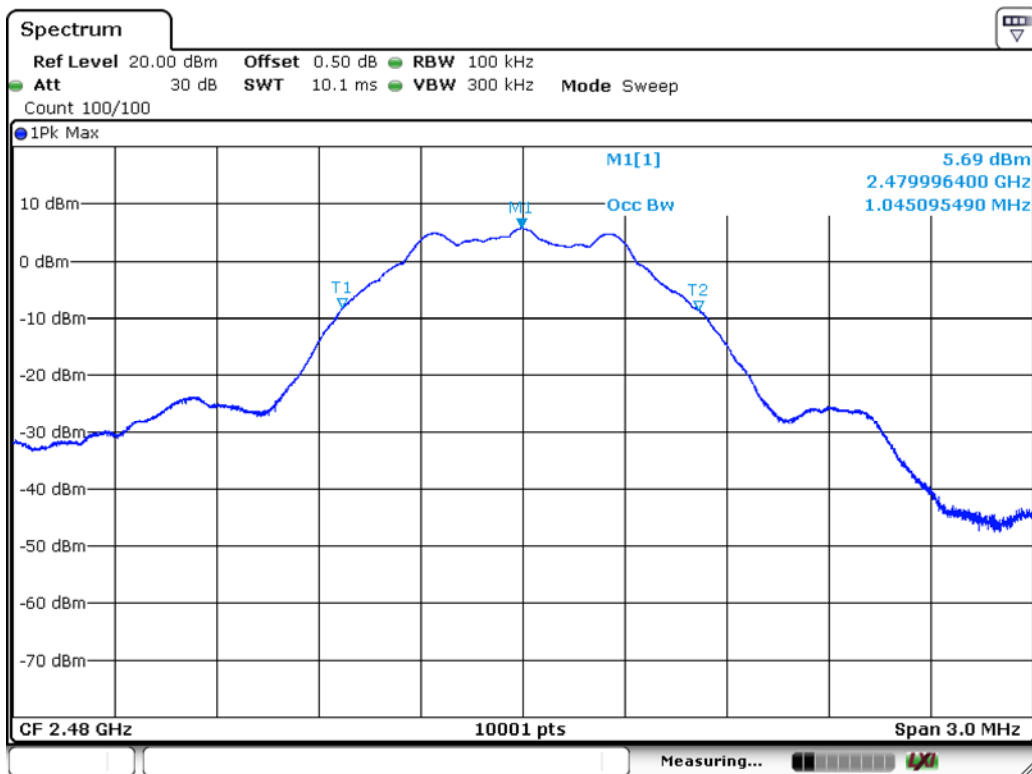
Date: 14.JAN.2018 02:36:23

Channel 19



Date: 14.JAN.2018 02:35:55

Channel 39

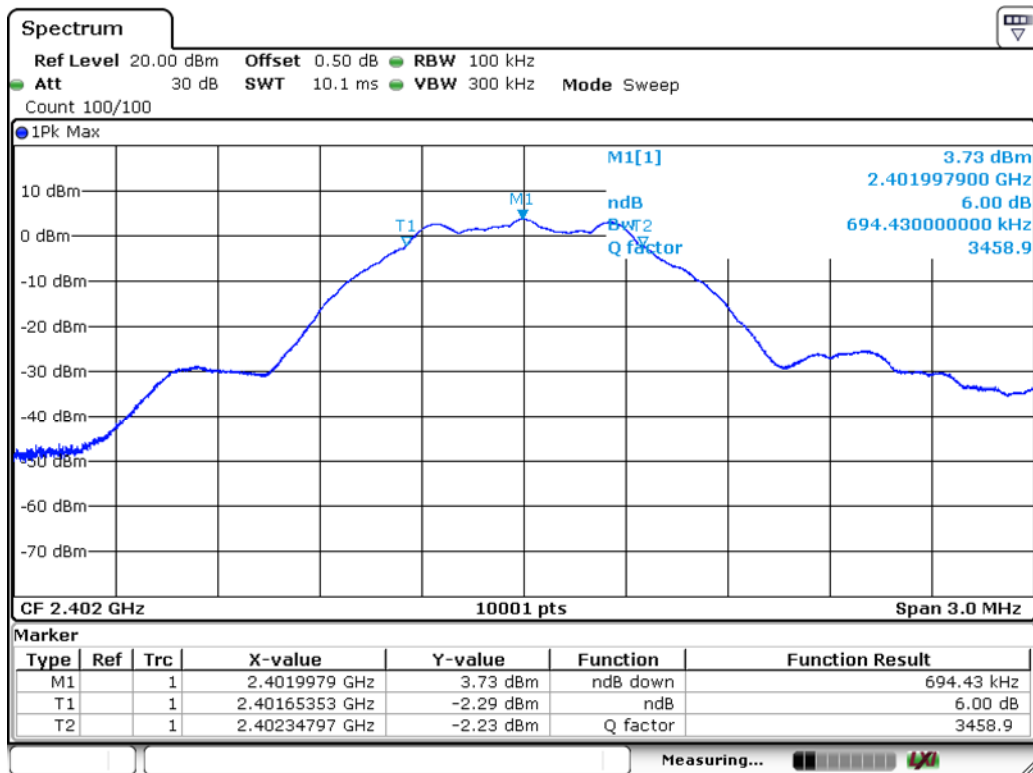


Date: 14.JAN.2018 02:34:56

Product	Bluetooth USB Adapter		
Test Item	DTS Bandwidth		
Test Mode	Mode 1: Transmit Mode		
Date of Test	2018/01/14	Test Site	SR10-H

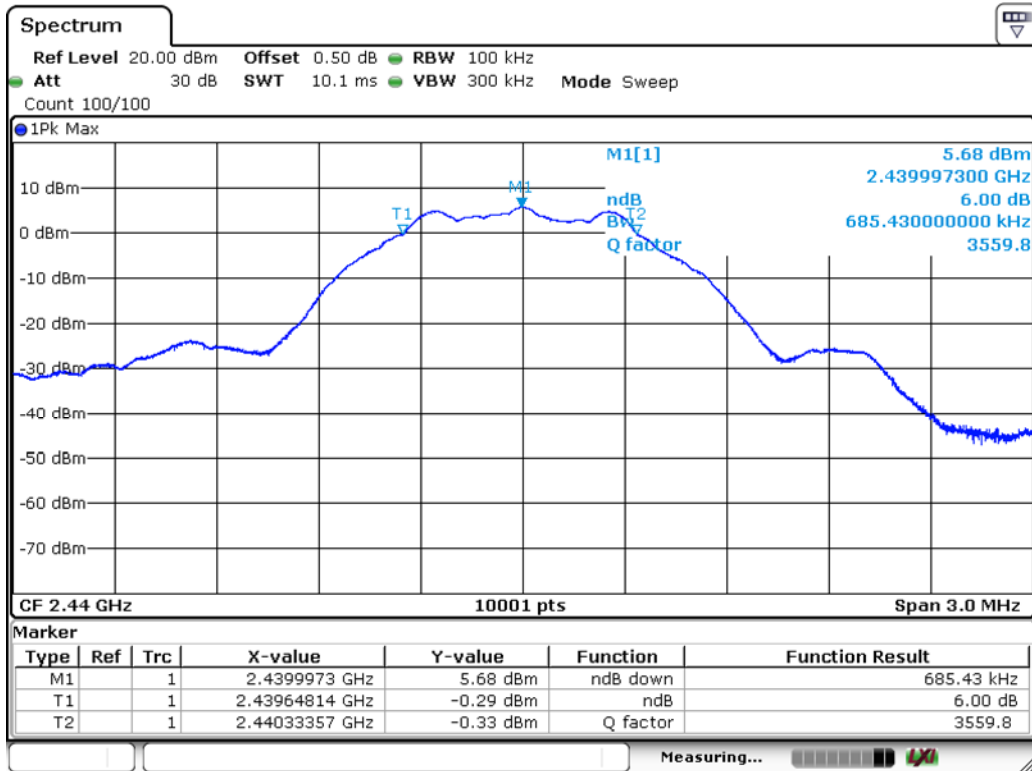
Channel No.	Frequency (MHz)	Measure Level (KHz)	Limit (KHz)	Result
00	2402	694	≥ 500	Pass
19	2440	685	≥ 500	Pass
39	2480	686	≥ 500	Pass

Channel 00



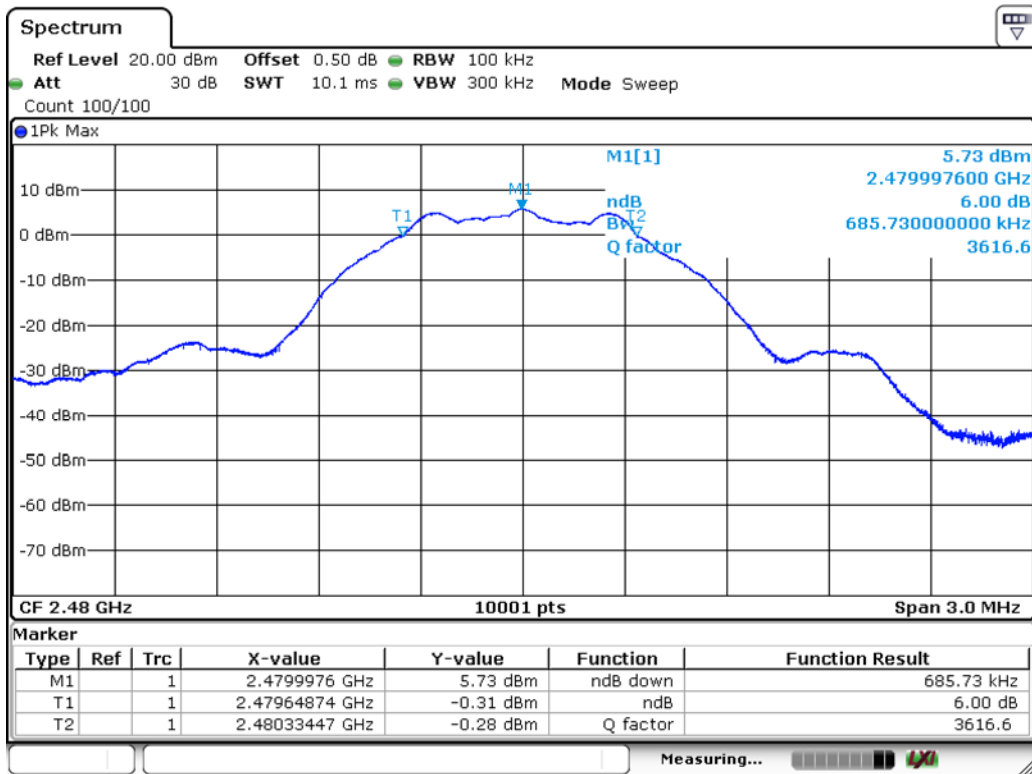
Date: 14.JAN.2018 02:32:20

Channel 19



Date: 14.JAN.2018 02:32:52

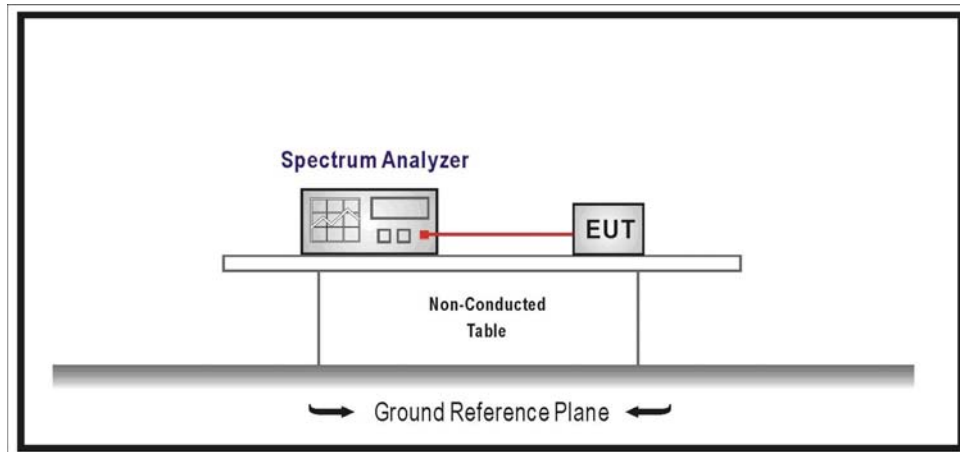
Channel 39



Date: 14.JAN.2018 02:33:21

8. Power Density

8.1. Test Setup



8.2. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.3. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB558074 D01V04 for compliance to FCC 47CFR 15.247 requirements.

8.4. Test Specification

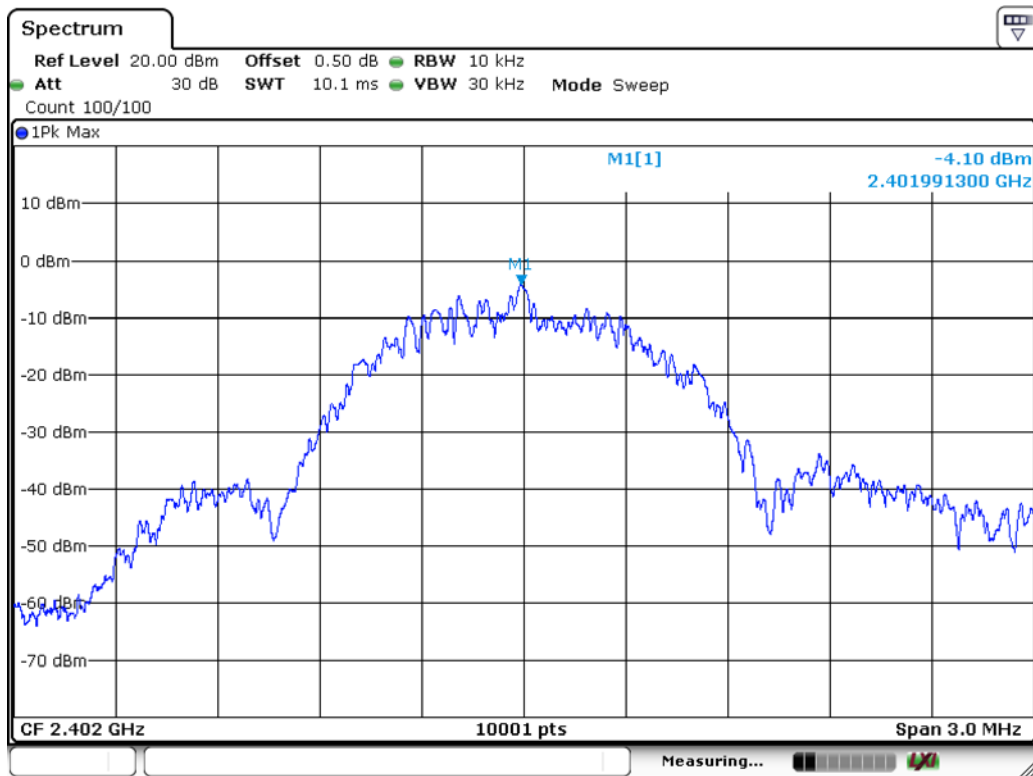
According to FCC Part 15 Subpart C Paragraph 15.247

8.5. Test Result

Product	Bluetooth USB Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit Mode		
Date of Test	2018/01/14	Test Site	SR7

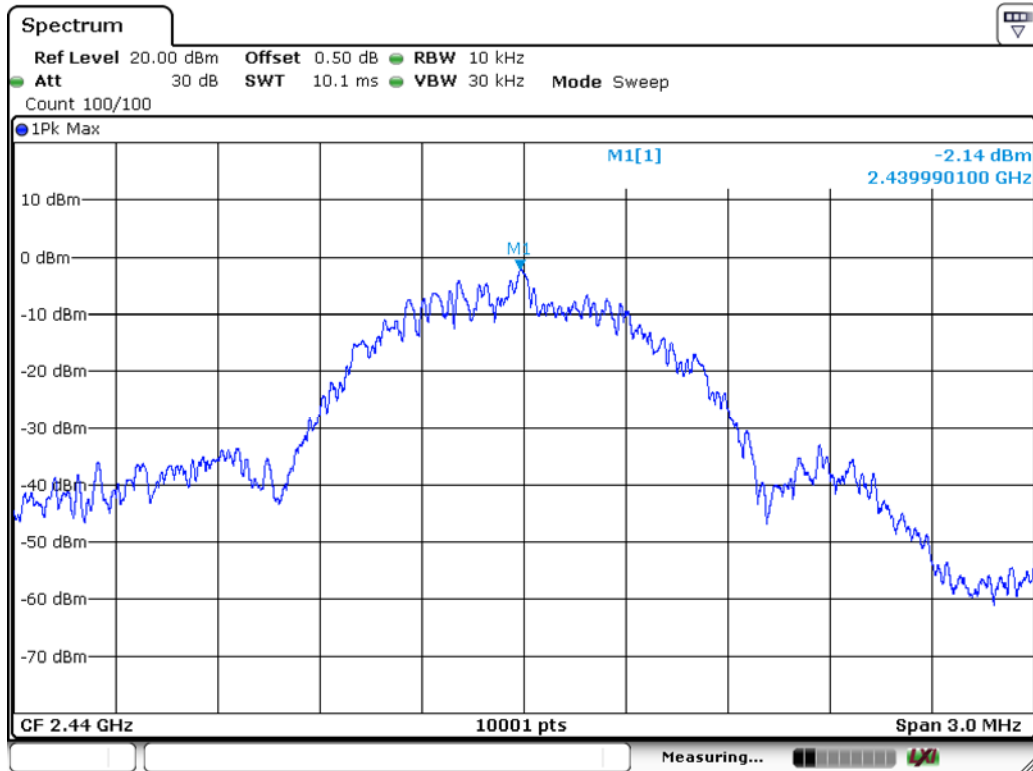
Channel No.	Frequency (MHz)	Measure Level (dBm/3kHz)	Limit (dBm/3kHz)	Result
00	2402	-4.100	≤ 8	Pass
19	2440	-2.140	≤ 8	Pass
39	2480	-2.090	≤ 8	Pass

Channel 00



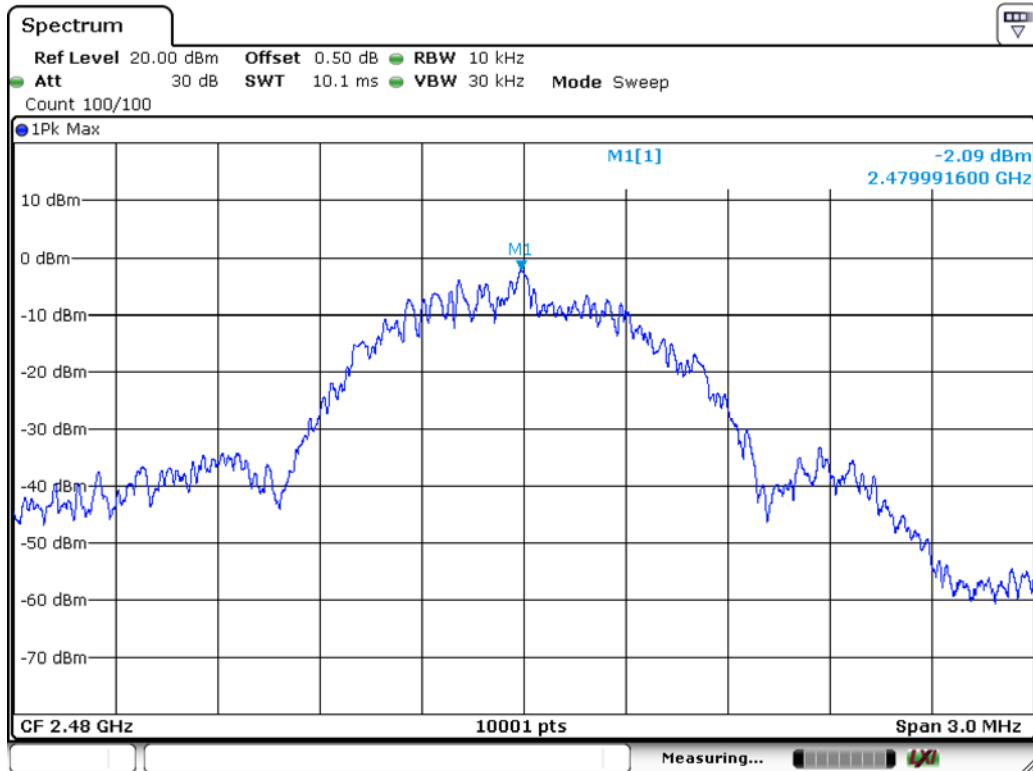
Date: 14.JAN.2018 02:49:18

Channel 19



Date: 14.JAN.2018 02:48:11

Channel 39



Date: 14.JAN.2018 02:47:16